AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 | 80

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
0001	05-Oct-2009		

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
AFGHANISTAN DISTRICT SOUTH (AES) US ARMY CORPS OF ENGINEERS APO AE 09355	W5J9LE	See Item 6	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		
	X	9A. AMENDMENT OF SOLICITATION NO. W917PM-09-R-0120
	X	9B. DATED (SEE ITEM 11) 23-Sep-2009
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [X] is extended, [ ] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

[ ] A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

[ ] B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

[ ] C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

[ ] D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Amendment 0001 will replace section 00100 & 00120 as well as the drawing. Original drawings were site sketches, offical drawings are included in this Amendment. Scope of Work & Geotechnical data have also been amended.

A Site Visit will be on 18 October. 24 OCT will be the final day for Questions. The Closing date has been extended to 28 OCT 2009.

Project will be a best value award. The POC for this project is now Hamilton Batista. hamilton.batista@usace.army.mil

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED 05-Oct-2009

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION 00010 - SOLICITATION CONTRACT FORM

The required response date/time has changed from 22-Oct-2009 02:00 PM to 28-Oct-2009 11:00 AM.

The required performance has changed from :

ROTARY WING RAMP PHASE II, KANDAHAR AIR FIELD (KAF), KANDAHAR, AFGHANISTANPROJECT IS A DESIGN/BUILD, FIRM FIXED PRICE CONSTRUCTION CONTRACT.
NAICS CODE: 237310
SIZE STANDARD: $33.5 MILLION
POP - 270 DAYS FROM RECEIPT OF NOTICE TO PROCEED
USACE-AES POC:
EVAN B. CARTER
CONTRACTING SPECIALIST
US: 540-667-3173; AF: 070-663-5155 evan.b.carter@usace.army.mil

to

ROTARY WING RAMP PHASE II, KANDAHAR AIR FIELD (KAF), KANDAHAR, AFGHANISTANPROJECT IS A DESIGN/BUILD, FIRM FIXED PRICE CONSTRUCTION CONTRACT.
NAICS CODE: 237310
SIZE STANDARD: $33.5 MILLION
POP - 270 DAYS FROM RECEIPT OF NOTICE TO PROCEED
USACE-AES POC:HAMILTON BATISTA
CONTRACTING SPECIALIST
US: 540-667-5520; Hamilton.batista@usace.army.mil.

SECTION 00100 - BIDDING SCHEDULE/INSTRUCTIONS TO BIDDERS

The following have been modified:

SECTION 00110

SECTION 00110
Rotary Wing Phase II, Kandahar Air Field (KAF)
(DESIGN-BUILD) – BEST VALUE
PROPOSAL PREPARATION

1. INQUIRIES

Perspective offerors should submit inquiries related to this solicitation by writing or calling the following (collect calls will not be accepted):

All questions will be submitted in writing by e-mail to:

Mr. Hamilton Batista
E-MAIL ADDRESS: Hamilton.batista@usace.army.mil

Please include the solicitation number, and project title with your questions. Written inquiries must be received by this office not later than 5 calendar days prior to the date set for receipt of offers.

Oral explanations or instructions are not binding. Any information given to an Offeror which impacts the solicitation and/or offer will be given in the form of a written amendment to the solicitation.

As this is a competitive negotiation acquisition, there is no public bid opening and no information will be given out as to the number of offerors or the results of the competition until all awards are made.

2. DIRECTIONS FOR SUBMITTING PROPOSALS:
Offers must be in sealed envelopes/packages, marked and addressed as follows:

MARK PACKAGES:
Solicitation No. **W917PM-09-R-0120**
Offer Closing Date: **28 October 2009**

Offer Closing Time: Proposals must be received at the gate ECP-3, Kandahar Air Field, Kandahar, Afghanistan between 09:00 to11:00 A.M. Afghanistan Time or to the U.S. Corps of Engineer Compound (USACE) Contracting Office 720 KAF Road Kandahar Air Field across from the bazaar.

ADDRESS PACKAGES TO:
Hamilton Batista
USACE-AES
APO-AE 09355

Special Instruction Pertaining to Hand Carried Offers: All Contractors submitting proposals must notify USACE Contracting Office personnel Hamilton Batista or Evan Carter by e-mail to request a letter of approval to Hand-Carry proposals through the gate at ECP-3 Kandahar Air Field, by no later than 21 October 2009.

3. PRE-PROPOSAL CONFERENCE / SITE VISIT
The Pre-proposal Conference and Site Visit will be held jointly. Please contract Mr. Michael Bell no later than 72 Hours before the scheduled site visit. The Site Visit/Pre-Proposal Conference is scheduled for 18 OCTOBER 2009 at 1300 Hrs Local Time (Kandahar). The request form included in Amendment 01 must be submitted if an Offeror wishes to attend the meeting. Contact Information:

Mr. Michael F. Bell
Michael.f.bell@usace.army.mil

IMPORTANT NOTES. (1) Remarks and explanations addressed during the conference shall not qualify or alter the terms and conditions of the solicitation. (2) The terms and conditions of the solicitation remain unchanged unless the solicitation is formally amended in writing.

4. TELEGRAPHIC OFFERS - - TELEGRAPHIC OFFERS ARE NOT ACCEPTABLE.
However, offers may be withdrawn by written or telegraphic notice. Any telegram to withdraw an offer sent to this office must be received in the office designated in the Request for Proposal (RFP) for receipt of offers not later than the exact date and time set for receipt of proposals. A telegraphic withdrawal of an offer received in such office by telephone from the receiving telegraph office not later than the exact date and time set for receipt of proposals shall be considered. However, the telephone message shall be confirmed by the telegraph company by sending a copy of the written telegram that formed the basis for the telephone call. The written telegram shall be sealed in an envelope by a proper official and sent to the office designated in the RFP for receipt of offers. The official shall write on the envelope (1) the date and time of receipt and by whom, and (2) the number of the RFP, and shall sign the envelope. The Offeror is responsible to inform the telegraph company of these requirements. No one from this office will be dispatched to the local telegraph office to pick up any telegram for any reason.

5. FACSIMILE OFFERS

Facsimile offers, modifications thereto, or cancellations of offers will not be accepted.

6. PROPOSAL SUBMISSION REQUIREMENTS AND INSTRUCTIONS

a. **REQUIREMENT FOR SEPARATE PRICE AND TECHNICAL PROPOSALS**.

(1) Each Offeror must submit both a Price Proposal and a Technical Proposal. The Price Proposal and the Technical Proposal must be submitted as separate volumes. Ensure that the outside of each separate volume is clearly marked to indicate its contents; and the identity of the offeror. Additionally, clearly identify the “original” cost/price proposal and the “original” technical proposal on the outside cover.

(2) Both the Price Proposal and the Technical Proposal must be received by the closing date and time set for receipt of proposals.

(3) No dollar amounts from the Price Proposal are to be included in the Technical Proposal.

(4) All information intended to be evaluated as part of the Technical Proposal must be submitted as part of the Technical Proposal. Do not cross-reference similar material in the Price Proposal, or vice versa. Also, do not include links to websites in lieu of incorporating information into your proposal.

(5) Do not include exceptions to the terms and conditions of the solicitation in either the technical or price proposal. Should the offer include any standard company terms and conditions that conflict with the terms and conditions of the solicitation, the offer may be determined "unacceptable" and thus ineligible for award. Should the offeror have any questions related to specific terms and conditions, these should be resolved prior to submission of the offer. The Offeror must clearly describe in the Proposal Cover Sheet submitted with the Price Proposal any exceptions to the contractual and/or technical terms and conditions of the solicitation contained in the Offer.

b. **DISCUSSIONS**.

The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror’s initial proposal should contain the offeror’s best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

c. **COST OR PRICING DATA**.

Offerors are not required to submit Cost or Pricing Data with their offers.

d. **GENERAL INSTRUCTIONS**.

(1) Submit only the hard-copy paper documents and the electronic files specifically authorized and/or required elsewhere in this section. Do not submit excess information, to include audio-visual materials, electronic media, etc.

(2) Use only 8 ½ by 11 inch paper for hard copy submissions, unless another paper size is specifically authorized elsewhere in this section for a particular submission. Do not use fold-outs (e.g.,11" x 14" or 11" x 17" sheets) unless specifically authorized in this section for a particular submission. Do not use a font size smaller than 10, an unusual font style such as script, or condensed print for any submission. All page margins must be at least 1 inch wide, but may include headers and footers.

(3) The preferred method for assembling your proposals is to use three-ring binders; however, the use of pressboard or other report covers with compression or other type fasteners is acceptable. Do not use spring clamps or exceed the recommended capacity of the fastener or binder. Do not use plastic multi-hole/spiral binding systems, heat binding systems, or other systems which do not facilitate the ready insertion of additional pages.

(4) "Confidential" projects cannot be submitted to demonstrate capability unless all of the information required for evaluation as specified herein can be provided to the Government as part of the Offeror's technical proposal. Offerors that include in their proposals information that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, must be clearly marked in accordance with the instructions at FAR 52.215-1, "Instructions to Offerors— Competitive Acquisition", paragraph (e), "Restriction on disclosure and use of data".

(5) In the case of an Offeror that is part of a large, multi-segmented business concern, provide information directly pertaining to the specific segment of the business concern (i.e., the division, group, unit, etc.) that will perform work under the prospective contract.

(6) For submissions with page limitations, the pages will be counted as follows: One side of the paper is one page; information on both the back and front of one sheet of paper will be counted as two pages. Where authorized, fold-out pages (11" x 14" or 11" x 17") will count as one page. Pages furnished for organizational purposes only, such as a "Table of Contents" or divider tabs, are not included in the page limitation.

e. SPECIFIC INSTRUCTIONS FOR THE PRICE PROPOSAL

(1) Number of Sets of the Price Proposal. Submit the ORIGINAL and ONE additional hard copy set of the Price Proposal.

(2) Size Restrictions and Page Limits. Use only 8 ½" x 11" pages. There are no page limits set for the price proposal. However, limit your response to information required by this solicitation. Excess information will not be considered in the Government's evaluation.

(3) Format and Contents of the Price Proposal and List of Tabs. The Price Proposal shall be appropriately labeled as such and shall be organized as indicated in the following chart. Note: If the Offeror is not required to submit any information under a listed Tab in accordance with the instructions below, that tab can be omitted. However, do not renumber the subsequent tabs.

TAB	CONTENTS OF THE PRICE PROPOSAL
#1	The Proposal Cover Sheet
#2	The SF1442 and Acknowledgement of Amendments
#3	Section 00010, Pricing Schedule
#4	Representations, Certifications, and Other Statements of Offerors
#5	JV Agreement, if applicable.

(4) Detailed Submission Instructions for the Price Proposal

TAB 1: The proposal cover sheet is required by FAR 52.215-1(2) (c) (i)-(v) and must be submitted by all offerors. This provision, titled "Instructions to Offerors Competitive Acquisition," and the format for the proposal cover sheet are furnished elsewhere in this section.

TAB 2: The SF 1442, Solicitation, Offer, and Award is to be completed by all Offerors and duly executed with an original signature by an official authorized to bind the company in accordance with FAR 4.102. Any and all amendments must be acknowledged by all Offerors in accordance with the instructions on the Standard Form 30, Amendment of Solicitation.

TAB 3: Section 00010, Pricing Schedule is to be completed in its entirety by all Offerors. See Section 00010 with attached notes, for further instructions.

TAB 4: All Offerors must have electronically completed the annual representations and certifications on the "Online Representations and Certifications Application" (ORCA) website or respond with the completed representations / certifications found in the solicitation.. The offerors are responsible for ensuring that these on-line Representations and Certifications are updated as necessary to reflect changes, but at least annually to ensure that they are kept current, accurate and complete. Additionally, the offeror must also complete and return the "Representations, Certifications, and Other Statements of Offerors" included in the solicitation. If the offeror is a Joint Venture, all participants must separately complete both the ORCA Representations and Certifications.

TAB 5: If the Offeror is a Joint Venture (JV), include a copy of the JV Agreement. If a JV Agreement has not yet been finalized/approved, indicate its status. JV Agreements must clearly indicate the percentages of the JV participants, in particular the percent of the controlling party, and a clear delineation of responsibilities and authorities between the JV parties.

f. SPECIFIC INSTRUCTIONS FOR THE TECHNICAL PROPOSAL

(1) Number of Sets of the Technical Proposal. Submit the (1) ORIGINAL and (3) additional sets of the written Technical Proposal, with each set separately packaged.

(2) Format and Contents of the Technical Proposal and List of Tabs. The original and all copies of the technical proposal will be appropriately labeled as such. Each set shall be organized

using the tabs specified in the following chart. Note: The main tabs directly correlate to the evaluation factors identified in Section 00120.

TAB	CONTENTS OF THE TECHNICAL PROPOSAL
Factor #1	EXPERIENCE
Factor #2	PROJECT MANAGEMENT and SECURITY PLAN
Factor #3	RESOURCES (Key Personnel and Capacity)
Factor #4	PAST EVALUATIONS/PERFORMANCE

(3) Page Limitations. See paragraphs 6.d.(2) and 6.d.(6) above for format and page count instructions. The following page limitations are established for each factor described above:

- Factor #1, Experience – Limited to One (1) Experience Form and Five (5) pages of representative design information per project. Maximum 5 projects.
- Factor #2, Project Management and Security Plan – Limited to Six (6) pages total, not including organizational charts
- Factor #3, Resources (Key Personnel and Capacity) – Limited to One (1) page for each resume/Individual provided and three pages for capacity.
- Factor #4, Past Evaluations/Performance – Limited to One (1) page per project.

Tables of content, proposal cover letters, and tabs between proposal information do not count toward any page limitations in the proposal.

(4) Detailed Submission Requirements for the Technical Proposal. The following is a detailed description of the information to be submitted under each TAB.

(i) **TAB 1: FACTOR 1, EXPERIENCE:** Demonstrate the experience of the offeror and/or team, including sub-contractors, on projects same/similar to that described in the solicitation. The projects submitted must have been performed by the offeror and/or same team member(s) who will be providing similar services under the prospective contract.

The Government will evaluate the relevant work experience of the offeror and their proposed team, including subcontractors, on projects same/similar to that described in this solicitation. The Contractor shall complete a minimum of three (3), but no more than five 5), "Experience Information" forms, attached at the end of this section, in response to this factor. All blocks must be filled in and all data should be accurate, current, and complete. All projects submitted must have been underway or completed with the last five (5) years within US DOD's CENTCOM area of authority including: Afghanistan, Tajikistan, Iraq, Pakistan etc. At least one (1) of the projects provided must be valued at over $20 million US, and all other projects must be at least $5 million US. All of the submitted projects must be design-build projects underway or completed in the last five (5) years. For each project that included design, the offer may also submit up to 5 pages of information representative of the design efforts of the project.

(ii) **TAB 2: FACTOR 2, PROJECT MANAGEMENT AND SECURITY PLAN:** Provide a narrative that addresses the offeror's project management and security plan. The plan must address the following elements, as a minimum:

- Procedures used to manage the project, to include project management, quality control, and safety.
- How the contractor plans to meet major design and construction project milestones in the specifications that reflects completion of all work within the period of contract performance.
- Provide a narrative response that addresses timely delivery and receipt of equipment and materials at the job site which coincides with the major construction project milestones and provides for protection of equipment and materials to and from an isolated project site in a hostile environment.
- Management of concurrent work on multiple job sites if it is applicable to this project.
- Security plan including construction materials procurement/transferring to the site, transiting through base security, and site security including both constructed facilities and construction materials storage.

The offeror shall include an organizational chart depicting lines of authority and responsibility for all personnel/entities on the project, including subcontractors, from the lowest level to the corporate level. The organizational chart shall clearly indicate which entity has overall authority for the contract and identify by name and title the single Point of Contact to the Government for all project-related matters.

(iii) **TAB 3: FACTOR 3, RESOURCES (Key Personnel and Capacity)**:

Sub-factor 3.1 - Key Personnel:

The Offeror must provide resume data for the following key personnel: Project Manager – Design, Project Manager - Construction, Safety Officer, Quality Control Manager, Senior Architect, Senior Civil Engineer, Senior Electrical Engineer, Senior Mechanical Engineer, Fire Protection Engineer, Construction Superintendent/Foreman, and Project Security Manager. All key personnel shall have a degree (engineers and project managers) in the field of work governed by the position they are assigned to and a minimum of five (5) years of professional experience in their field (all key personnel). For example, a Civil Engineer must have a degree in Civil Engineering and five (5) years of professional civil engineering experience.

Key Personnel	Requirement
Project Manager – Design	A degree & minimum 5 years professional experience.
Project Manager - Construction	A degree & minimum 5 years professional experience.
Quality Control Manager	A degree & minimum 5 years professional experience.
Senior Civil Engineer	A degree & minimum 5 years professional experience.
Senior Electrical Engineer	A degree & minimum 5 years professional experience.
Senior Mechanical Engineer	A degree & minimum 5 years professional experience.
Fire Protection Engineer	A degree & minimum 5 years professional experience.
Construction Superintendent/Foreman	Minimum 5 years professional experience.
Project Security Manager	Minimum 5 years professional experience.
Safety Officer	Minimum 5 years professional experience.

Resume information to be provided for personnel identified above shall be limited to no more than one (1) page per person and shall include the following information as a minimum:

- Name and title
- Project assignment
- Name of firm with which associated
- Years experience with this firm and with other firms
- Education degree(s), year, specialization, if applicable
- Active professional registration, year first registered, if applicable
- Other experience and qualifications relevant to same/similar work required under this Contract
- Whether the individual will be dedicated exclusively to the project described in this RFP, and if not, the percentage of the individual's time that will be exclusively dedicated to this project.

The Government will evaluate the adequacy of the Offeror's key personnel to successfully complete the project in accordance with the requirements outlined in Section 00110.

The contractor shall address how it will have adequate personnel for the project described in this RFP in light of any other ongoing projects and contractual commitments it may have within Afghanistan.

Sub-factor 3.2 - Capacity:

- The contractor shall submit a list of ALL current ongoing contracts, projects and commitments within Afghanistan as a prime or subcontractor. The list shall include the contract number, contract amount, original contract completion date, current official contract completion date and the current progress or status (including estimated % completion and remaining principal tasks).

- The contractor shall identify the key personnel, plant, and equipment assigned to each of those contracts or projects.

- The contractor shall identify key plant and equipment to be dedicated to the project described in this RFP.

- The contractor shall provide a narrative that explains how award of this contract will affect current contracts or projects and how the current contracts or projects will affect this contract if it is awarded to the contractor.

- The contractor shall provide a narrative that explains their capability, plan, and available resources to implement the project described in this RFP without adversely affecting current contracts or projects.

- The contractor shall provide a narrative that outlines its capacity and plan to produce, transport, and place a sufficient volume of concrete to ensure completion within the contract performance period, including daily concrete production (including plant to produce concrete), transport (including equipment used to transport), and placement capability, within the constraints of the project site.

(iv) **TAB 4: FACTOR 4, PAST EVALUATIONS/PERFORMANCE:** For the projects listed under Factor 1 – Experience, provide letters of recommendations, past performance evaluations, letters of appreciation, commendations, and awards or certificates of appreciation. Following is the format you should follow for your past performance submittal.

(The following projects are to be the same projects submitted under Factor 1 Experience)

1. Project Name & Location:
2. Customer Point of Contact (Note: the Government may contact this customer to verify the information provided on this form):

Name:
Address:
Phone number:
Email Address:

3. Problems encountered and corrective actions taken:
4. List Change Orders and their circumstances:
5. Project scheduled completion date and actual completion date:

IF the above dates are different, explain reason for the change.

6. Initial Project Budget (US Dollars) and Final Actual Project Cost (US Dollars):

7. Safety record and accident reports:

8. References (submit the following): Customer Satisfaction letters, Letters of Appreciation, Performance Evaluations, Certification of Achievements, Letters of Recommendations.

The Contractor Performance Assessment Reporting System (to include ACASS, CCASS, and CPARS) will be utilized to validate past performance ratings on Department of Defense contracts and any other past performance information the Government deems necessary to evaluate a contractor's past performance. Firms without a history of past performance will be given a neutral rating.

The Government may contact any other sources for information regarding the offerors past performance and on any projects. The government may contact references provided as part of Factor 1 – Experience for information regarding the offeror's past performance on the project and for the purposes of assessing and verifying the scope of the work performed. Offerors should provide accurate, current, and complete contact information for references provided in the project descriptions.

7. PROPOSAL COVER SHEET

PROPOSAL COVER SHEET

1. Solicitation Number:

2. The name, address, DUNS number, and telephone/facsimile numbers of the Offeror (and electronic address if available).

3. A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item. Statement to include any exceptions in technical or cost/price proposal or exceptions inherent in Offeror's standard terms and conditions.

4. Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the Offeror's behalf with the Government in connection with this solicitation.

5. Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

8. SOURCE SELECTION USING THE BEST VALUE PROCESS.

The Government will select the offer that represents the best value to the Government by using the trade-off process described in FAR Part 15. This process permits tradeoffs between cost/price and technical ("non-cost") factors and allows the Government to accept other than the lowest priced offer or other than the highest rated offer. The award decision will be based on a comparative assessment of proposals against all source selection criteria in the solicitation. See Section 00120.

For the award decision, all evaluation factors other than cost or price, when combined, are more important than price. All non price factors will be treated equally and all non price sub-factors will be treated equally. The Government is concerned with striking the most advantageous balance between technical merit ("quality") and price to the Government (i.e., the price). The degree of importance of price could become greater depending upon the equality of the technical proposals. If competing technical proposals are determined to be essentially equal, price could become the controlling factor.

Template Experience Information Form:

<table>
<tr><td colspan="2">EXPERIENCE INFORMATION
(To be completed by Contractor)</td></tr>
<tr><td rowspan="3">1. Contractor:
Name:

Address:</td><td>2. Contract /Task Order(TO) /Purchase Order (PO) Number:</td></tr>
<tr><td>3. Contract/TO/PO Dollar Value:</td></tr>
<tr><td>4. Contract/TO /PO Status: Active
Complete

Completion Date (w/ extensions):</td></tr>
<tr><td colspan="2">5. Project Title:

Location:</td></tr>
<tr><td colspan="2">6. Project Description:</td></tr>
<tr><td colspan="2">7. Project Owner or Project Manager for the Client – provide:
Name:

Address:

Telephone Number and E-mail:</td></tr>
</table>

-END OF SECTION-

SECTION 00120

SECTION 00120
Rotary Wing Phase II, Kandahar Air Field (KAF)
(DESIGN-BUILD) – BEST VALUE
PROPOSAL EVALUATION AND CONTRACT AWARD

1. ELIGIBILITY FOR CONTRACT AWARD

In accordance with the FAR, no contract shall be entered into unless the contracting officer ensures that all requirements of law, executive orders, regulations, and all other applicable procedures, including clearances and approvals, have been met. This includes the FAR requirement that no award shall be made unless the contracting officer makes an affirmative determination of responsibility. To be determined responsible, a prospective contractor must meet the general standards in FAR Part 9 and any special standards set forth in the solicitation.

2. SOURCE SELECTION USING THE BEST VALUE PROCESS

The Government will select the offer that represents the best value to the Government by using the trade-off process described in FAR Part 15. This process permits tradeoffs between cost/price and technical ("non-cost") factors and allows the Government to accept other than the lowest priced offer. The award decision will be based on a comparative assessment of proposals against all source selection criteria in the solicitation.

3. RELATIVE IMPORTANCE OF PRICE TO THE TECHNICAL EVALUATION FACTORS

All evaluation factors other than cost or price, when combined, are more important than price. All non price factors will be treated equally and all non price sub-factors will be treated equally. The Government is concerned with striking the most advantageous balance between technical merit ("quality") and price to the Government (i.e., the price). The degree of importance of price could become greater depending upon the equality of the technical proposals. If competing technical proposals are determined to be essentially equal, price could become the controlling factor.

4. EVALUATION OF THE PRICE PROPOSALS

a. Price will be evaluated and considered but will not be scored or combined with other aspects of the proposal evaluation. The proposed prices will be analyzed for reasonableness. They may also be analyzed to determine whether they are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the Offeror's Technical Proposal. Additionally, all offers will be analyzed for unbalanced pricing.

b. The price will be used along with the technical evaluation to make a selection for award. Since evaluation of the price proposal will represent a portion of the total evaluation, it is possible that an offeror might not be selected for award because of unreasonable, unrealistic, or incomplete price proposal information. The Government will evaluate the format and clarity of the price proposal.

c. Other Award Factors: The Contracting Officer shall consider several factors in the selection process which are important, but not quantified, such as:

(1) Agreement by the offeror to all general and special contract provisions and clauses.

(2) Determination of responsibility of the contractor by the Contracting Officer in accordance with the provisions of the Federal Acquisition Regulation, Part 9.1. In order to be determined responsible, a prospective contractor must:
(a) Have adequate financial resources to perform the contract or the ability to obtain them.
(b) Be able to comply with the required or proposed delivery or performance schedule taking into consideration all existing commercial and Governmental business commitments.;
(c) Have a satisfactory performance record.
(d) Have a satisfactory record of integrity and business ethics.
(e) Have the necessary organization, experience, accounting and operational controls, and technical skills, or the ability to obtain them.
(f) Have the necessary production, construction, and technical equipment and facilities, or the ability to obtain them.
(g) Be otherwise qualified and eligible to receive an award under applicable laws and regulations.

5. EVALUATION OF THE TECHNICAL PROPOSAL

The Technical Proposal will be evaluated based on the following evaluation criteria:

a. **FACTOR 1: EXPERIENCE:**

The Government will evaluate the relevant work experience of the offeror and their proposed team, including subcontractors, on projects same/similar to that described in this solicitation. The Contractor shall complete a minimum of three (3), but no more than five (5), "Experience Information" forms, attached at the end of this section, in response to this factor. All blocks must be filled in and all data should be accurate, current, and complete. In order to receive a satisfactory rating, at least one (1) of the projects submitted must be valued at over $20 Million US and the other projects must be at least $5 Million US within US DOD's CENTCOM area of authority including: Afghanistan, Tajikistan, Iraq, Pakistan etc. All submitted projects must be design build. All projects must have been underway or completed in the last five (5) years. Offerors with greater experience on same/similar relevant projects (type of services, similar dollar value, complexity, USACE design / construction requirements, and applicable quality standards) will receive a higher rating than those with dissimilar or non-relevant projects.

b. **FACTOR 2, PROJECT MANAGEMENT AND SECURITY PLAN:**

Responses to this factor will be evaluated for:

- Offeror's ability/procedures used to manage the project, to include project management, quality control, and safety;
- How the offeror plans to meet major design and construction project milestones in the specifications that reflects completion of all work within the period of contract performance.
- Provide a narrative response that addresses timely delivery and receipt of equipment and materials at the job site which coincides with the major construction project milestones and provides for protection of equipment and materials to and from an isolated project site in a hostile environment.
- Management of concurrent work on multiple job sites if it is applicable to this project.

- Security plan including construction materials procurement/transferring to the site, site security including both constructed facilities and construction materials storage.

In addition, the offeror shall include an organizational chart depicting lines of authority and responsibility for all personnel/entities on the project, including subcontractors, from the lowest level to the corporate level. The organizational chart shall clearly indicate which entity has overall authority for the contract and identify by name and title the single Point of Contact to the Government for all project-related matters.

c. **FACTOR 3: RESOURCES (Key Personnel and Capacity):**

Sub-factor 3.1 - Key Personnel: Key personnel resumes will be evaluated to determine the depth and breadth of personnel experience on same/similar projects and as it relates to the Responsibilities that person will have on this contract. All key personnel shall a minimum of five (5) years of professional experience in their field. Key personnel shall have a degree in the field of work governed by the position they are assigned to as follows: Project Manager – Design, Project Manager – Construction, Quality Control Manager, Senior Architect, Senior Civil Engineer, Senior Electrical Engineer, Senior Mechanical Engineer, and Fire Protection Engineer. For example, a Civil Engineer must have a degree in Civil Engineering and five (5) years of professional civil engineering experience.

Key Personnel	Requirement
Project Manager – Design	A degree & minimum 5 years professional experience.
Project Manager - Construction	A degree & minimum 5 years professional experience.
Quality Control Manager	A degree & minimum 5 years professional experience.
Senior Civil Engineer	A degree & minimum 5 years professional experience.
Senior Electrical Engineer	A degree & minimum 5 years professional experience.
Senior Mechanical Engineer	A degree & minimum 5 years professional experience.
Fire Protection Engineer	A degree & minimum 5 years professional experience.
Construction Superintendent/Foreman	Minimum 5 years professional experience.
Project Security Manager	Minimum 5 years professional experience.
Safety Officer	Minimum 5 years professional experience.

Proposals should also address how the offeror will have adequate key personnel to timely and successfully complete the project in accordance with the scope of work and technical requirements described in this RFP, as well as the adequacy of its personnel to do the same in light of any other ongoing projects and contractual commitments it may have within Afghanistan, as outlined in Section 00110. Offerors better able to dedicate experienced personnel to this project and less constrained by personnel commitments to other ongoing projects and contractual commitments in Afghanistan will receive higher ratings.

Sub-factor 3.2 - Capacity: Offerors who more convincingly demonstrate by their responses to the bullets, below, that they have the reserve capacity for additional contracts or projects (including specifically the project described in this RFP) without adversely affecting existing projects, contracts and commitments will receive a higher rating than those which appear to be at or near capacity or fail to provide convincing evidence of surplus capacity. In order to receive a satisfactory rating, the Offeror must provide the following for evaluation:

- The contractor shall submit a list of ALL current ongoing contracts, projects and commitments within Afghanistan as a prime or subcontractor. The list shall include the contract number, contract amount, original contract completion date, current official contract completion date and

the current progress or status (including estimated % completion and remaining principal tasks) .

- The contractor shall identify the key personnel, plant, and equipment assigned to each of those contracts or projects.

- The contractor shall identify key plant and equipment to be dedicated to the project described in this RFP.

- The contractor shall provide a narrative that explains how award of this contract will affect current contracts or projects and how the current contracts or projects will affect this contract if it is awarded to the contractor.

- The contractor shall provide a narrative that explains their capability, plan, and available resources to implement the project described in this RFP without adversely affecting current contracts or projects.
- The contractor shall provide a narrative that outlines its capacity and plan to produce, transport, and place a sufficient volume of concrete to ensure completion within the contract performance period, including daily concrete production (including plant to produce concrete), transport (including equipment used to transport), and placement capability, within the constraints of the project site.

d. **FACTOR 4: PAST EVALUATIONS/PERFORMANCE:**

The Government will evaluate the relevant work experience of the Offeror and their proposed team, including subcontractors, on projects same/similar to that described in this solicitation. The Contractor shall complete a minimum of three (3), but no more than five 5), "Experience Information" forms, attached at the end of this section, in response to this factor. All blocks must be filled in and all data should be accurate, current, and complete. All projects submitted must have been underway or completed with the last five (5) years within US DOD's CENTCOM area of authority including: Afghanistan, Tajikistan, Iraq, Pakistan etc. At least one (1) of the projects provided must be valued at over $20 million US, and all other projects must be at least $5 million US. All of the submitted projects must be design-build projects underway or completed in the last five (5) years. For each project that included design, the offer may also submit up to 5 pages of information representative of the design efforts of the project.

For the purpose of the past performance evaluation, offerors shall be defined as business arrangements and relationships, such as Joint Venture participants, teaming partners, and major subcontractors. The past performance record of each firm in the business arrangement may be evaluated by the Government.

In the case of an Offeror without a record of recent, relevant past performance (and for which there is also no recent, relevant past performance information for its predecessor companies or key subcontractors), or for whom information on past performance is not available or cannot be verified, the Offeror will not be evaluated favorably or unfavorably on past performance, and given a neutral. This does not preclude the Government from making award to a higher-priced Offeror with a favorable past performance record over a lower-priced Offeror with a neutral past performance rating.

6. RELATIVE WEIGHTING OF THE TECHNICAL EVALUATION FACTORS

For the award decision, all evaluation factors other than cost or price, when combined, are more important than price. All non price factors will be treated equally and all non price sub-factors will be treated equally. The Government is concerned with striking the most advantageous balance between technical

merit ("quality") and price to the Government (i.e., the price). The degree of importance of price could become greater depending upon the equality of the technical proposals. If competing technical proposals are determined to be essentially equal, price could become the controlling factor.

7. GENERAL TECHNICAL CRITERIA

a. Material omission(s) may cause the technical proposal to be rejected as unacceptable.

b. Technical proposals which do not provide the specified information in the specified location in accordance with the submission instructions may be downgraded. The Government is under no obligation to search for information that is not in the specified location.

c. Proposals which are generic, vague, or lacking in detail may be downgraded. The Offeror's failure to include information that the Government has indicated should be included may result in the proposal being downgraded and/or being found deficient if inadequate detail is provided.

d. The Government cannot make award based on a deficient offer. Therefore, a rating of "Unsatisfactory" under any sub-factor will make the offer ineligible for award, unless the Government elects to enter into discussions with that Offeror and all deficiencies are remedied in a revised proposal.

SITE VISIT

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995) – ALTERNATE I (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) An organized site visit has been scheduled for -- 18 October 2009

(c) Participants should contact —

Charles Wilburn
Resident Engineer
Kandahar Airfield Resident Office
E-mail: charles.r.wilburn@usace.army.mil
Comm Phone: 540-678-4579
DSN: 312-265-4579
Cell: 079-768-0349

Or

William Bell
Project Manager
AED – Kandahar Project Management Office
E-mail: william.f.bell@usace.army.mil
Comm Phone: 540-667-2956
DSN: 318-265-2956
Cell: 079-885-0294

Escorts to the project site will be provided the day of the site visit. The Corps of Engineers Resident office will pick up contractors at the holding area for ECP No.3 at 11:00 a.m. and at the COMKAF Airport Terminal at 11:30 a.m.

Questions concerning access to KAF shall be directed to the COMKAF (Commander, Kandahar Airfield**) Security Office. The Roshan number for the Security Office is 079-559-0504.**

Contractors with CAC card (or equivalent Third Country identification) are requested to provide the information to assist the Corps for planning purposes by completing and sending Exhibit 2 by email. Contractors are requested to limit the number of personnel participating in the site visit to two (2) maximum.

For contractors that do NOT have a CAC or equivalent identification for access onto Kandahar Airfield, the following will be required:

1. YOU WILL NOT BE ALLOWED TO ENTER KANDAHAR AIRFIELD (KAF) WITH CELL PHONES, CAMERAS, PENS, PENCILS, STICK/THUMB DRIVES OR MAP OF KANDAHAR AIRFIELD. DO NOT CARRY THESE ITEMS.
2. Meet USACE representatives at Entry Control Point (ECP) No. 3. The USACE representative will have a sign showing a RED CASTLE on the display. The USACE representative will be at ECP No. 3 at 11:00 a.m. with transportation to the site.
3. Badges will be prepared in advanced for contractors that submitted the required information at least 72 hours in advance of the site visit as stated above.
4. All companies will be required to stay in one group and be escorted by the USACE representative at one time.

SECTION 00600 - REPRESENTATIONS & CERTIFICATIONS

The following have been modified:
011000.1210 - SCOPE OF WORK

SECTION 01 10 00.12 10
SCOPE OF WORK

PART 1 GENERAL

1.1 PROJECT DESCRIPTION(Revision 1)

This project is the second phase of the Rotary-Wing Ramp and Taxiway project. The first phase is being performed under contract W912ER-09-C-0014. This phase consists of the design and construction of aviation parking apron to support twenty-eight (28) parking spaces, connecting taxiways, an Aircraft Direct Fueling Facility, and associated lighting, markings, tie down and grounding points as shown and defined in SECTION 01 80 00.12 10 TECHNICAL REQUIREMENTS. The work does not include any Unexploded Ordinance (UXO) clearing or de-mining. **A certificate of demining is available.** The work shall include the preparation of construction design documents and the construction required to provide fully functional facilities. These facilities shall be designed and constructed in accordance with current U.S. Design Standards, Department of Defense, and Department of the Army, safety and security standards, applicable local standards and other criteria.

1.2 LOCATION

The site location is within the Kandahar Air Base in Afghanistan.

1.3 PERIOD OF PERFORMANCE

All work, including de-mobilization and final clean up, shall be completed within the outlined phasing plan from Notice to Proceed for design.

1.4 SUMMARY OF WORK

The Contractor shall design and construct the work listed as a
design-construct contract and in accordance with the requirements stated in the specification sections and other contract documents.

1.5 AIR TRAFFIC OPERATIONS AND CONSTRUCTION OPERATIONS (Revision 1)

The existing **Kandahar** Air Field runway and taxiways shall remain operational during construction of these projects. The Contractor shall prepare a construction phasing plan that will lay out a detailed plan for integrating.

1.6 AIRFIELD SAFETY PROCEDURES

The contractor will comply with all requirements of Section 32 Airfield Operations of EM 385-1-1 Safety and Health requirements Manual, 3 November 2003, Engineering Technical Letter 04-02 Standard Airfield Pavement Marking Schemes Change 1, UFC 3-260-01 Airfield and Heliport Planning and Design, Attachment 15 Construction Phasing Plan and Operational Safety on the Airfield During Construction and with the Kandahar Airfield Operations safety and housekeeping requirements. The contractor will be required to provide both day/night barriers and solar lighting to mark construction areas, before beginning any construction activities within 30m of the runway or 15m of an active taxiway. The contractor shall maintain all necessary equipment onsite at all times while work is progressing, to perform the required clean up activities. All surfaces where aircraft travel; and all adjacent surfaces shall be cleaned at the completion of each work shift and otherwise when a threat to aircraft safety is eminent, as directed by the Contracting Officer.

1.7 UNEXPLODED ORDNANCE (UXO)

The contract limits of this project are believed to be clear of UXO, however, UXO may be discovered and/or uncovered within or around the construction work areas. If, during construction activities, UXO is unexpectedly discovered or uncovered, or suspected to be present, all operations shall cease immediately. The Contractor shall safeguard the site pending notification and arrival of the Government's UXO team. No further work shall be conducted in that location until the Government's UXO team has assessed the situation to determine if disposal action is required. Once the UXO has been removed and the Government's UXO team has issued an "All Clear" notice, construction work may continue.

1.8 SECURITY

The Contractor shall comply with current base security requirements to
include trans-loading aggregates before entering the base and inspection of vehicles.

1.9 PHASED ACCEPTANCE OF THE WORK BY THE GOVERNMENT

The Government may take beneficial use of each completed phase of the work as it is accepted by the Contracting Office. Contractor's responsibility for warranty begins from the individual dates of each phased acceptance and extends as further defined elsewhere in the Contract.

-- End of Section --

SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

The following have been modified:

013113.1210 - SPECIAL CLAUSES

SECTION 01 31 13.12 10
SPECIAL CLAUSES

PART 1 GENERAL

1.1 PRECONSTRUCTION CONFERENCE

At the earliest practicable time, prior to commencement of the work, the Contractor and any Subcontractors whose presence is necessary or requested, shall meet in conference with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to the details of the administration and execution of this contract. This will include but not necessarily be limited to the Contractor's Quality Control (CQC) Program, the Contractors Accident Prevention Program, submittals, correspondence, schedule, access to the work site, security requirements, interface requirements, temporary facilities and services, hazards and risks, working after normal hours or on weekends or holidays, assignment of inspectors, representations, special requirements, phasing, and other aspects of this project that warrant clarification and understanding.

1.2 AREA USE PLAN

The Contractor shall submit to the Contracting Officer, within ten (10) calendar days after award of this contract, an Area Use Plan designating intended use of all areas within the project boundaries. This plan shall include, but not necessarily be limited to the following: the proposed location and dimensions of any area to be fenced and used by the Contractor; construction plant and building installations/the number of trailers and facilities to be used; avenues of ingress/egress to the fenced areas and details of the fence installation; drawings showing temporary electrical installations; temporary water and sewage disposal installations; material storage areas; hazardous storage areas. Any areas that may have to be graveled shall also be identified. The plan shall also include a narrative description of the building structural system, the site utility system and the office or administration facilities. The Contractor shall also indicate if the use of a supplemental or other staging area is desired. The Contractor shall not begin construction of the mobilization facilities prior to approval by the Contracting Officer of the Area Use Plan described herein.

1.3 CONTRACTOR'S MOBILIZATION AREA (Revision 1)
Commander, Kandahar Airfield (COMKAF) is responsible for designating areas for Contractor's use. The Contractor is responsible for securing his laydown yard with COMKAF's approval through the Planning Board. The contractor will be informed by COMKAF of the precise location of any LSA. If the contractor awarded this contract already has or will be assigned an LSA space at Kandahar Airfield resulting from another contract award, the contractor shall be required to use the existing LSA or shall be assigned an LSA for all of their work. Contractors will not automatically be granted additional LSA space based on multiple contract awards. Additional LSA space will be proportioned as the Government deems necessary. This decision may be made by COMKAF after contract award.

There will be numerous other contracts underway at Kandahar Airfield during the same period this contract work is underway. The contractor will need to coordinate use of the LSA with other contractors.

The perimeter fence will be extended to enclose the Contractor's work area, but the date of completion for this work is unknown at this time.

1.3.1 Contractor's Temporary Facilities (Revision 1)

1.3.1.1 General (Revision 1)

All facilities within the Contractor's mobilization area shall be of substantial construction suitable for the local weather conditions. Sanitary facilities shall meet the requirements of Corps of Engineers, Safety and Health Requirements Manual EM 385-1-1. Local nationals will not be granted any privileges under this contract. Government provided services are for American and Foreign national contractors only. It is the Contractor's responsibility to secure any privileges. Government dining facilities are available for Contractor's use.

1.3.1.2 Administrative Field Offices

The Contractor may provide and maintain administrative field office facilities within the mobilization area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.3.1.3 Storage Area

The Contractor shall construct a temporary 1.8 meter (6 foot) high chain link fence around trailers and materials. The fence shall include plastic strip inserts, colored green or brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Trailers, materials, or equipment shall not be placed or stored outside the fenced area unless approved in writing by the Contracting Officer.

1.3.1.4 Plant Communication

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. These devices shall be made available for use by Government personnel.

1.3.1.5 Appearance of Mobilization Site Facilities and/or Trailers

Mobilization Site Facilities and/or Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers or other transportable structures which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the construction site until such work or maintenance has been performed to the satisfaction of the Contracting Officer.

1.3.1.6 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse unpaved areas which are not established roadways with construction equipment or other vehicles, such areas shall be

covered with a layer of gravel as necessary to prevent rutting and the tracking of soil onto paved or established roadways; gravel gradation shall be at the Contractor's discretion.

1.3.1.7 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own facilities and equipment.

1.3.1.8 Sanitation

a. Sanitary Facilities: It is the Contractor's responsibility to provide sanitary waste collection and disposal within the confines of the assigned LSA parcel.

b. Trash Disposal: The Contractor shall be responsible for collection and disposal of trash from the work areas and from the mobilization area. General construction debris and demolition debris shall be collected and transported by the Contractor to a location designated by the Government. Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Loose debris capable of being windblown, shall be immediately placed in sealed or covered containers to prevent it from being blown onto taxiways or runways. Any dirt or soil that is tracked onto paved or surfaced roadways shall be cleaned daily. Materials resulting from demolition activities that are salvageable shall be stored within the fenced area described above. Stored material not indoors, whether new or salvaged, shall be neatly stacked when stored.

1.3.1.9 Telephone

The Contractor shall make arrangements to install and pay all costs for telephone facilities desired.

1.3.1.10 Restoration of Storage Area

Upon completion of the project and after removal of mobilization facilities, trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse unpaved areas shall be removed and all such areas restored to their original conditions.

1.3.2 Protection and Maintenance of Traffic

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the Host Nation and base authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's

traffic on roads selected for hauling material to and from the site shall interfere as little as possible with base traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

1.3.2.1 Use of Existing Roads as Haul Routes

The Contractor shall be responsible for coordinating with the base authorities for use of any existing roads as haul routes. Construction, and routing of new haul roads, and/or upgrading of existing roads to carry anticipated construction traffic shall be coordinated with the Base authorities and is the sole responsibility of the Contractor. The Contractor shall provide dust control in accordance with paragraph 1.7 "Dust Control", and provide grading for all haul roads utilized.

1.3.2.2 Employee Parking

The Contractor's employees may be allowed parking on the military installation. The Contractor is responsible for transporting workers (local nationals) from off post to the worksite, coordinating security identification screening, and cooperating in gate searches with the base authorities. The government reserves the right to terminate any and all contractor parking at any time.

1.3.3 Temporary Project Safety Fencing and Barricades

The Contractor shall impose all measures necessary to limit public access to hazardous areas and to ensure the restriction of workers to the immediate area of the construction and mobilization site. The Contracting Officer may require in writing that the Contractor remove from the work any employee found to be in violation of this requirement.

1.3.3.1 Barricades

Barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night. Travel to and from the project site shall be restricted to a route approved by the Contracting Officer.

1.3.4 Host Nation Authorizations, Permits and Licenses

It shall be the Contractor's responsibility to obtain such local authorizations, permits and licenses necessary to establish his quarry operations, batching operations and haul routes (See Special Clause entitled: COMPLIANCE WITH HOST COUNTRY RULES AND CUSTOMS).

1.4 NOT USED

1.5 RESPONSIBILITY FOR PHYSICAL SECURITY

Prior to mobilization, the Contractor shall submit his proposed means of providing project security to prevent unauthorized access to equipment,

facilities, materials and documents, and to safeguard them against sabotage, damage, and theft. The Contractor shall be responsible for physical security of all materials, supplies, and equipment of every description, including property which may be Government-furnished or owned, for all areas occupied jointly by the Contractor and the Government, as well as for all work performed.

1.6 NOT USED

1.7 DUST CONTROL

The Contractor shall be required to control objectionable dust in the work areas, access roadways, and haul roads by means of controlled vehicle speeds or dust palliatives. Vehicles transporting sand, cement, gravel or other materials creating a dust problem shall be covered, as directed by the Contracting Officer, or in accordance with local Laws, codes, and regulations.

1.8 NOT USED

1.9 NOT USED

1.10 DIGGING PERMITS

1.10.1 Requirements for Digging Permits

Prior to the start of any work activity that requires excavation within the current base, the Contractor shall obtain a digging permit. All dig permits must be submitted to the COMKAF Engineer or his disgnee located on installation. POC will be provided by Contracting Officer.

1.10.2 Requests for Digging Permits

Requests for Digging Permits shall be submitted to Contracting Officer a minimum of seven (7) days prior to the start of the work activity covered by the permit. The request for a Digging Permit shall include a narrative description of the work to be performed and a detailed map of the area of the excavation clearly marking the location of all known utilities or other obstructions. If the work activity covered by the Digging Permit request also requires a utility outage, a separate request for the outage shall be submitted in accordance with the paragraph entitled CONNECTIONS TO EXISTING UTILITIES.

1.10.3 Preparation of Requests for Digging Permits

Prior to submitting a request for a Digging Permit, the Contractor shall carefully review the area to be excavated to determine the location of existing utilities and other obstructions. The Contractor will review available drawings and will conduct a visual inspection of the site. The Contractor will utilize underground utility detecting devices such as metal and cable detectors to determine the location of existing utilities. All utility lines found shall be clearly flagged or marked and the location of the utility shall be shown on the drawing to be submitted with the request for Digging Permit.

1.10.4 Existing Underground Utilities

The Contractor shall exercise utmost care in researching locations of existing utilities and reducing damage to existing utilities. Any utilities damaged by the Contractor shall be promptly repaired by the Contractor. The Contracting Officer will review and approve any proposed repairs. Any damage to existing utilities will be immediately reported to the Contracting Officer and the Base Commander.

1.11 CONNECTIONS TO EXISTING UTILITIES

1.11.1 General

Any outage of any utility service shall be requested in writing at least ten (10) days in advance of the date requested for the commencement of the outage. The Contractor shall provide a request, detailing the type of outage needed (water, sewer, electrical, steam, etc.), the time needed to perform the work, the reason for the outage, and the known affected facilities. The Contracting Officer shall be contacted prior to the outage to confirm the time and date. If the Contractor fails to initiate work at the approved time, the Contracting Officer may cancel the approved outage and may direct the Contractor to resubmit a new request. No part of the time lost due to the Contractors failure to properly schedule an outage shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

1.11.1.1 Performance of Work During Non-Standard Hours

To minimize outage impact to the mission of the installation, all outages shall be scheduled on weekends or from 2100 - 0530 hours on duty days. The period proposed for performance of the outage shall include sufficient contingencies to preclude impact to the peak working hours 0530 - 1800 hours during the workweek.

1.11.1.2 Exterior Night Lighting

Exterior night lighting shall be provided in conformance with EM-385-1-1 entitled Safety and Health Requirements Manual and must meet COMKAF's force protection requirements.

1.11.2 Existing Underground Utilities

The Contractor is provided notice that existing utilities may be present in the construction area. The Contractor shall exercise the utmost care in researching locations of existing utility lines by implementing control measures to eliminate, or reduce to a level acceptable to the Contracting Officer, the chance of damaging or destroying existing utilities.

1.11.2.1 Use of Underground Utility Detecting Device

Prior to any excavation, a metal and/or cable-detecting device shall be used along the route of the excavation. All underground utilities discovered by this method will be flagged a minimum distance of one-half (1/2) meter on each side of the location.

1.11.2.2 Hand Excavation

Hand excavation methods and special supervisory care shall be used between any flagged markers, in areas of known or suspected hazards, and in areas known or suspected to have multiple and/or concentrated utility lines or connections.

1.11.3 Repair of Damaged Utilities

The Contractor shall be responsible to repair any utilities damaged by him. The method of repair and schedule for performance of the repair shall be coordinated with, and subject to the approval of, the Contracting Officer. The repair work and any temporary work required to keep the system operational while repairs are being completed, shall be performed at no cost to the Government.

1.12 WATER

It is the Contractor's responsibility to provide water distribution within the confines of the assigned LSA parcel.

1.13 NOT USED

1.14 ELECTRICITY (CONTRACTOR PROVIDED) (Revision 1)
Electrical service **is** not available for use under this contract; therefore all electric current required by the Contractor shall be the responsibility of the Contractor, furnished at his own expense. The Contractor shall provide diesel generators to meet his demand requirements. The means of doing so, such as by temporary distribution systems, shall be the responsibility of the Contractor. All temporary connections for electricity shall be subject to the approval of the Contracting Officer and shall comply with Corps of Engineers manual EM 385-1-1 entitled Safety and Health Requirements Manual. All temporary lines shall be furnished, installed, connected and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer. Before final acceptance of systems, or facilities, all temporary connections installed by the Contractor shall be removed at his expense in a manner satisfactory to the Contracting Officer.

1.15 NOT USED

1.16 NOT USED

1.17 NOT USED

1.18 WORK OUTSIDE REGULAR HOURS

If the Contractor desires to carry on work outside regular base duty hours, or on holidays (including the following U.S. holidays: New Year's Day, Martin Luther King Jr's Birthday, George Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving and Christmas), he shall submit an application to the Contracting Officer. The Contractor shall allow ample time to enable satisfactory arrangements to be made by the Government for inspecting the work in progress. At night, exterior lighting shall be provided in conformance with EM-385-1-1 entitled "Safety and Health Requirements Manual".

1.19 SCHEDULING OF WORK IN EXISTING FACILITIES (Revision 1)

As soon as practicable, but in any event not later than thirty (30) calendar days after award of this contract, the Contractor shall meet in conference with the Contracting Officer, or his duly authorized representatives, to discuss and develop mutual understanding relative to the scheduling of work in and access to the existing facilities where work has to be performed under this contract, so that the Contractor's proposed construction schedule is coordinated with the operating and security requirements of the installation.

1.20 Phasing of Construction (Revision 1)

The contractor shall commence work with the design and construction in the following sequence: 1) FARP 2) Parking in western area; and 3) Parking in eastern area. The temporary FARP and ASP shall remain in operation until the permanent FARP is complete and operational.

1.21 NOT USED

1.22 NOT USED

1.23 NOT USED

1.24 RESIDENT MANAGEMENT SYSTEM (RMS)

1.24.1 General

The requirements contained herein are in addition to and supplement the requirements mandated by Section 01 45 02.00 10 QUALITY CONTROL SYSTEM (QCS). The Resident Management System is an automated quality management and contract administration system that provides an efficient method to plan, accomplish, and control project management by integrating job specific requirements, corporate technical knowledge, and management policies. RMS controls the following activities:

a. Project Planning.

b. Milestone Events.

c. Contract Administration.

d. Progress Payments.

e. Correspondence.

f. Contract Schedule.

g. Quality Control.

h. Submittal Register.

i. Accident Prevention.

j. Management Reporting.

1.24.2 Computer Software to be Furnished by the Government

The software program modules required for the Contractor shall be downloaded from the RMS web site located at the following: http://www.rmssupport.com/rmswebhome.aspx . No login or password is required. For assistance with the QCS program, the Contractor may contact the RMS Help Desk Coordinator. Contact information is provided within the Contacts portion of the aforementioned website. New versions of the Contractor's Module may be down loaded from the RMS web site during the course of the contract, and the contractor shall use the new modules when available. It is the sole responsibility of the Contractor to ensure that the data files are converted to the new modules.

1.24.3 RMS User Guides and Support

The RMS Center is maintained to assist the Contractor's field engineers and office personnel perform their duties by providing expertise to plan, accomplish, and control the daily technical and administrative functions of construction projects managed by the U.S. Army Corps of Engineers. Points of contact, available guides, software updates and assistance with the associated Quality Control System (QCS) program may be obtained from the RMS home page located at the following http://www.rmssupport.com/rmswebhome.aspx . No login or password is required.

1.24.4 Contractor Responsibility

The Contractor is responsible for establishing, maintaining and updating the provided Contractors Programming. The RMS shall be prepared and maintained at the work site. The Contractor shall utilize a Government furnished Contractor Quality Control System (QCS) Program. The Program includes a QC Daily Reports form which must also be used. This form may be in addition to other Contractor desired reporting forms. However, all other such reporting forms shall be consolidated into this one Government specified QC Daily Reports Form.

1.24.4.1 Government-Furnished Module Elements

The Contractor shall also be required to complete Government-Furnished Module elements which include, but are not limited to, subcontractor codes, planned cumulative progress earnings, subcontractor information showing trade, name, address, point-of-contact, and insurance expiration dates, definable features of work, pay activity and activity information, required Quality Control tests tied to individual activities, planned Customer/User Training tied to specific specification paragraphs and Contractor activities, Installed Property Listing, Transfer Property Listing and Submittal information relating to specification section, description, activity number, review period and expected procurement period. The sum of all activity values shall equal the contract amount (inclusive of all modifications), and all Proposal Schedule Items, Options and Additives shall be separately identified, in accordance with Section 00010 entitled SUPPLIES OR SERVICES AND PRICES/COSTS. Proposal Schedule items may include multiple activities, but activities may only be assigned to one such Proposal Schedule item.

1.24.4.2 Quality Assurance Comments

During the course of the contract, the Contractor will receive various quality assurance comments from the Government that will reflect corrections needed to Contractor activities or reflect outstanding or future items

needing the attention of the Contractor. The Contractor shall acknowledge receipt of these comments by a specific sequential number reference on his QC Daily Report. The Contractors QC daily reports shall also reflect the scheduled and actual dates when these items are completed or corrected to permit Government verification.

1.24.4.3 Project Schedule

The Project Schedule provided by the Contractor in compliance with Section 01 32 17.00 20 NETWORK ANALYSIS SCHEDULES (NAS), of the Technical Provisions, shall be fully compatible with the RMS System. The RMS system is compatible with the Standard Data Exchange Format(SDEF)scheduling systems. It is recommended that one of the following software programs be utilized: Approach (PPMS 30,000), AlderGraf Systems (AlderGraf), Pinnell-Busch (PMS-80), Primavera Systems, Welcome Technologies (Open Plan). The Contractor's schedule system shall include, as specific and separate activities, all three (3) Phase Inspection meetings, all Operation and Maintenance (O&M) Manuals, instructions and training for operation and maintenance, Contractor furnished spare parts, submittals, all test plans of electrical and mechanical equipment or systems that require validation testing or instructions to Government Representatives, and all CQC completion inspections.

1.24.5 Payment

Separate payment will not be made for maintaining and updating the RMS System, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Proposal Schedule. Submission of all required modules shall be completed to the satisfaction of the Contracting Officer prior to any contract payment (except for Bonds, Insurance and/or Mobilization, as approved by the Contracting Officer) and shall be updated as required. The Contracting Officer may elect to withhold any and all partial payments until the submissions are satisfactory.

1.24.6 RMS Implementation Plan

The Contractor shall furnish for review and acceptance by the Government, not later than twenty (20)calender days after receipt of Notice To Proceed, the plan for implementation of the RMS System.

1.24.6.1 Quality Control (QC)/Quality Assurance (QA) Mutual Understanding Meeting

The Contractor shall prepare in outline form, a proposed RMS implementation plan which shall be discussed at the pre-construction conference. Detailed discussions including the Contractor's approved RMS implementation plan shall be made a supplemental part of the Quality Control (QC)/Quality Assurance (QA) mutual understanding meeting. During this supplemental meeting the Government will provide an overview of the RMS system. At a minimum, Contractor personnel responsible for the following shall be in attendance: Contractor Quality Control, Project Schedule, Submittals, Partial Payment Estimates, Subcontracting, Operation and Maintenance Training, and installed property and equipment.

1.24.6.2 RMS Implementation Plan

At a minimum, the RMS plan shall include the following:

a. A description of the RMS team, including a chart showing lines of authority, duties, and responsibilities.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a RMS function.

c. Procedures for joint Government/Contractor review and verification of proposed input. This shall include certification from the Contractor that the submitted input is accurate, current, and in strict conformance to all contract requirements.

d. Proposed procedures to ensure compatibility of the existing Government system with the Contractors proposed Hardware and Software.

e. Proposed controls, instructions and procedures to ensure smooth and effective transfer of electronic data.

f. Proposed reporting procedures, including reporting formats, techniques and equipment.

1.24.6.3 Acceptance of Plan

Approval of the Contractor's proposed plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his RMS Plan and operations including but not necessarily limited to modifications to hardware, software, and removal of personnel, as necessary, to obtain the quality and efficiency as specified.

1.24.6.4 Notification of Changes

After acceptance of the RMS plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

1.24.7 Personnel Requirements

The requirements for the RMS organization are a RMS System Manager and sufficient number of additional qualified personnel to ensure contract compliance.

1.24.7.1 RMS Manager

The Contractor shall identify as RMS Manager an individual within the onsite work organization who shall be responsible for overall management of RMS and have the authority to act in all RMS matters for the Contractor. The RMS Manager shall be a graduate engineer, with a minimum of 10 years construction experience. This RMS Manager shall be physically located on-site and shall be employed by the prime Contractor. The RMS Manager shall be assigned as RMS Manager but may have other duties. An alternate for the RMS Manager shall be identified in the plan to serve in the event of the RMS Manager's absence. The requirements for the alternate shall be the same as for the designated RMS Manager.

1.24.7.2 RMS Staff

The Contractor's RMS staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The RMS staff shall be subject to acceptance by the Contracting Officer.

1.24.7.3 RMS Office Facilities and Equipment

The Contractor shall provide adequate office space, computers, and other resources as necessary to maintain an effective and fully functional RMS organization.

1.24.8 Hardware and Software

The Contractor shall submit all of the RMS input data and updates required by the Contractor's Quality Control Module of the Government's Resident Management System (RMS).

For QCS System Hardware and software Requirements, RMS Server Minimum Requirements, and RMS Workstation Minimum Requirements contractor shall obtain information from web site: http://www.rmssupport.com/rmswebhome.aspx

State of the Art Anti-Virus Software: The Contractor's computer software system shall be protected by a State-of-the-Art Anti-Virus protection system which shall be maintained and upgraded with all issued manufacturer's updates throughout the life of the contract period.

1.24.9 Notification of Noncompliance

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this clause. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

1.24.10 Contractor Partial Payment Estimates

The RMS System shall be used for preparing, approving, and printing the Contractors partial payment estimate.

1.24.10.1 Monthly Coordination Meeting

The RMS System shall be completely updated at least monthly. Specific calendar dates for submission of same shall be determined by the Contracting Officer. Prior to submitting a partial payment estimate, the Contractor shall schedule a coordination meeting with the Government to verify the status of activities proposed for payment. This meeting shall evaluate at a minimum the following:

a. Activities proposed for payment.

b. Total dollar value and previous earnings of each activity proposed for payment.

c. Percent or quantity proposed for payment by the Contractor.

d. Percent or quantity approved for payment by the Government.

e. Verification of activities started, on-going, or completed.

f. Verification that required "Three Phase-Inspections" have been conducted satisfactorily.

g. Verification that all Accident Prevention/Safety and Construction deficiencies have been noted and corrected to the satisfaction of the Contracting Officer.

h. Verification that there are no outstanding submittals.

i. Verification that CQC testing has been performed.

j. Verification that a daily record of as-built conditions is being maintained.

k. Verification that salvage material has been turned over.

l. Verification that Government furnished property has been transferred.

m. Verification that Contractor Requests for Information (RFI's) have been submitted.

n. Verification that installed property and equipment information is current in RMS. The RMS database shall include all information on the property and equipment at the time of installation of each item.

o. Verification of other required items as noted on the approved RMS Implementation Plan.

1.24.10.2 Re-submission of Partial Payment Estimates

Prior to requesting a partial payment estimate, the Contractor is required to submit and receive approval, for all elements of the RMS that require updating. In the event that any data is missing, unavailable, incorrect, or determined by the Contracting Officer to portray unrealistic parameters or misrepresent actual conditions, the Contracting Officer may require the Contractor to correct, revise and resubmit the required RMS input or status information, prior to accepting any partial payment estimate for evaluation. Any payment amount previously paid on the basis of inaccurate or incorrect information submitted by the Contractor, may be adjusted by the Contracting Officer in subsequent payment estimates. If the Contractor fails to submit the required updates, or transfers the information in a fragmented or piecemeal fashion, the Contracting Officer may, in addition to other remedies provided under this contract, withhold approval of all or any portion of the partial payment estimate until a complete RMS update has been provided and approved.

1.25 PREPARATION OF AS-BUILT DRAWINGS (CONTRACTOR)

1.25.1 General

Upon completion of each facility under this contract, the Contractor shall prepare and furnish both as-built drawings and Geospatial shapefiles to the Contracting Officer. The as-built drawings shall be a record of the construction as installed and completed by the Contractor. They shall include all the information shown on the contract set of drawings, and all deviations, modifications, or changes from those drawings, however minor, which were incorporated in the work, including all additional work not appearing on the contract drawings, and all changes which are made after any final inspection of the contract work. In the event the Contractor accomplished additional work which changes the as-built conditions of the facility after submission of the final as-built drawings, the Contractor shall furnish revised and/or additional drawings and drawing files as required to depict final as-built conditions. The requirements for these additional drawings shall be the same as for the as-built drawings specified in this paragraph. Additionally all site improvements shown on the site drawings and site utilities shall be provided in ESRI ArcGIS 9.2 Geospatial shape files using Universal Transverse Mercator (UTM) coordinate system.

1.25.2 Daily Record of As-Built Conditions

1.25.2.1 General

The Contractor shall maintain a full size set of contract drawings for depicting a daily record of as-built conditions. These drawings shall be maintained in a current, reproducible condition at all times during the entire contract period and shall be readily available for review by the Contracting Officer's Representative at all times. The as-built drawings shall be updated daily by the Contractor showing all changes from the contract plans which are made in the work, or additional information which might be uncovered in the course of construction. This information shall be recorded on the prints accurately and neatly by means of details and notes. Changes and additional information marked on the contract plans should be made in red or green color for highlighting purposes.

1.25.2.3 Daily Record of As-Builts

The daily record of As-Built conditions shall include but not necessarily be limited to the following:

a. All necessary information for As-Built conditions including proprietary materials, equipment, system, and patented processes, shall be transferred from the appropriate shop drawings and digitally incorporated into the As-Built drawings in the Computer Assisted Design and Drafting (CADD) format specified by this clause. Under NO circumstances will shop drawings and submittals approved by the Government be used to supplant and/or supplement the requirements of this clause. As-Built drawings that substitute shop drawings/submittals for original CADD files will be returned for resubmission.

b. The location and description of any utility lines or other installations of any kind or description known to exist within the construction area. The location includes dimensions to permanent features.

c. The location and dimensions of any changes within the building or structure, and the accurate location and dimension of all underground utilities and facilities.

d. Correct grade or alignment of roads, structures, or utilities if any changes were made from contract plans.

e. Correct elevations if changes were made in site grading.

f. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

g. The topography and grades of all drainage installed or affected as part of the project construction.

h. All changes or modifications of the original design including those which result from the final inspection.

i. Where contract drawings or specifications allow options, only the option actually used in the construction shall be shown on the as-built drawings. The option not used shall be deleted.

1.25.3 Computer Assisted Design and Drafting (CADD) Software

Digital As-Built drawing files shall be prepared in the format native to the latest version in common use of AutoCad COMPUTER ASSISTED DESIGN AND DRAFTING (CADD) software. Geospatial shape files shall be provided using ESRI ArcGIS 9.2. The shape files shall be compliant with the Spatial Data Standards for Facilities, Infrastructure and Environment (SDFSIE) Release 2.600. The standards are available at http://www.sdsfie.org/SDSFIEHome/tabid/36/Default.aspx.

1.25.4 Translated or Converted Files - Drawing Files

Under NO circumstances shall the Contractor translate (or convert) the digital As-Built files from one CADD software program to another (e.g., from Bently MicroStation to Autocad). As-Built drawings that show signs of translation or conversion will be returned for resubmission.

1.25.5 Geospatial Shape Files and Data

All geospatial data shall overlay on the as-built drawings. The contractor shall utilize a topology build and clean routine and assure the following:

a. No erroneous overshoots, undershoots, dangles or intersections in the line work.

b. Lines should all be continuous, i.e. do not create dashed lines with many small line segments.

c. Point features should be digitized as points, not graticules, symbols or icons

d. No sliver polygons.

e. All polygons completely close and have a single unique centroid

f. Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer.

g. Feature Attributes: The contractor shall identify the classification, type, location, ID number, and any other necessary attributes (specified by the Government) for all features.

h. Metadata: The contractor shall complete all metadata elements marked mandatory and mandatory-if-applicable as defined by the FGDC Content Standards for Digital Geospatial Metadata for each feature layer collected. This standards document can be found at: http://www.fgdc.gov/standards/standards_publications.

1.25.6 Preliminary As-Built Drawings Submission

Two (2) copies of the preliminary as-built marked prints and prints of the Geospatial shape files shall be delivered to the Contracting Officer at the time of final inspection of each facility for review and approval. Changes and additional information marked on the contract plans should be made in red or green color for highlighting purposes. If upon review of the preliminary as-built drawings and Geospatial shape files, errors or omissions are found, the drawings will be returned to the Contractor for corrections. The Contractor shall complete the corrections in red or green color, and return the as-built marked prints and Geospatial shape files marked prints to the Contracting Officer within ten (10) calendar days.

1.25.7 Final As-Built Drawings Submission

The Contractor shall update the digital contract drawing files and Geospatial shape files to reflect the approved final as-built conditions and shall furnish those updated drawing files and plots of the final as-built drawings and Geospatial shape files to the Contracting Officer.

a. Only personnel proficient in the use of Computer Assisted Design and Drafting (CADD) for the preparation of drawings shall be employed to modify the contract drawing files or prepare new drawing files. Only personnel proficient in the use of ESRI ArcGIS 9.2 and the standards listed in SDFSIE shall be employed to create or modify the Geospatial shape files.

b. Existing digital drawing files shall be updated to reflect as-built conditions. Independent drawing files containing only as-built information are not acceptable. The modifications shall be made by additions and deletions to the original drawing files, and where additional drawings are necessary, they shall be developed in individual digital files for each new drawing. All additions and corrections to the contract drawing files shall be clear and legible, and shall match the adjacent existing line work and text in type, size, weight, and style. New or revised information placed into the design files shall be placed on the levels and in the colors used for placement of the corresponding initial data. Similarly, the drawing size, title block, and general format of new drawings shall be consistent with the format established by the original drawings.

c. In the preparation of as-built drawings, the Contractor shall remove "Bubbles" used by the Government to highlight drawing changes made during design/construction. Triangles associated with those earlier drawing changes shall be left on the drawings and the Contractor shall not add triangles to designate modifications associated with representation of the as-built condition. The revision block identification of the drawing modifications shall be left intact and the date of completion and the words "REVISED AS-BUILT" shall be placed in the revision block above the latest existing notation. Each drawing shall have the words "DRAWING OF WORK AS-BUILT" in letters 4.5 mm (3/16") high placed below the drawing title portion of the drawing title block; between the border and the trim line.

d. The Contractor shall check all final as-built drawing files for accuracy, conformance to the initial drawing scheme and the above instructions. The Contracting Officer will review the drawings and drawing files for conformance to these standards.

e. Digital drawing files shall be furnished to the Contracting Officer on CD-ROM or other media and format as approved by the Contracting Officer. A transmittal sheet containing the name of the files, the date of creation, the CD-ROM number, and a short description of the contents, shall accompany the CD-ROM.

f. A sample drawing drawing of the as-builts and Geospatial shape files shall be furnished to the Contracting Officer before delivery of final as-built drawings as a test to demonstrate compliance with the above instructions and file format compatibility with the described CADD and Geospatial software and the standards listed in SDFSIE.

g. Five (5) complete sets of both the updated final Record Copy digital drawing files and Geospatial shape files and three (3) paper plots or copies of both the final Record drawings and Geospatial shape files prints shall be delivered to the Contracting Officer within 30 calendar days of approval of the preliminary as-built drawings and Geospatial shape files prints. If upon review of the final as-built drawings and Geospatial shape files, errors or omissions are found, the drawings, Geospatial shape files and drawing files will be returned to the Contractor for corrections. The Contractor shall complete the corrections and return both the digital files and Geospatial shape files and both the as-built prints and Geospatial shape files prints to the Contracting Officer within ten (10) calendar days.

1.26 NOT USED

1.27 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in accordance with Section 01 33 00.12 10 SUBMITTAL PROCEDURES FOR DESIGN/BUILD PROJECTS. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company involved and shall contain the name and address of the Contractor, the project name and location, description and the quantity of the items involved, and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification

shall not be construed as relieving the Contractor from furnishing satisfactory material.

1.28 ACCIDENT PREVENTION

The Contractor shall comply with all applicable Host Country laws and with such additional measures as the Contracting Officer may find necessary in accordance with CONTRACT CLAUSE 52.236-13 entitled ACCIDENT PREVENTION (NOV1991)-ALTERNATE 1 (APR 1984). Applicable provisions of the Corps of Engineers manual entitled Safety and Health Requirements Manual EM 385-1-1 will be applied to all work under this contract. The referenced manual may be obtained from the Contracting Officer at the jobsite or from the Afghanistan Engineer District at Kabul, Afghanistan.

1.28.1 Accident Prevention Program

Within fifteen (15) days after award of this contract, and at least ten (10) days prior to the accident prevention pre-work conference, four (4) copies of the Accident Prevention Plan required by the CONTRACT CLAUSE 52.236-13 entitled ACCIDENT PREVENTION (NOV 1991)- ALTERNATE I shall be submitted for review by the Contracting Officer. The Contractor shall not commence physical work at the site until the Accident Prevention Plan (APP) has been reviewed and accepted by the Contracting Officer. The APP shall meet the requirements listed in Appendix "A" of EM385-1-1. The program shall include the following: TAC Form 61 " Accident Prevention Program Hazard Analysis (Activity Hazard Analysis)" fully completed and signed by an executive officer of the company in block No. 13. The Activity Hazard Analysis is a method in which those hazards likely to cause a serious injury or fatality are analyzed for each phase of operations. Corrective action is planned in advance, which will eliminate the hazards. An analysis is required for each new phase of work. On large or complex jobs the first phase may be presented in detail with the submittal of the Accident Prevention Plan rather than presenting the complete analysis. If the plan is to be presented in phases, a proposed outline for future phases must be submitted as a part of the initial Accident Prevention Plan submittal. Accident Prevention Plans will be reviewed for timeliness and adequacy at least monthly with a signature sheet signed and dated documenting that these reviews took place. Copy of company policy statement of Accident Prevention and any other guidance as required by EM 385-1-1, Appendix A.

1.28.2 Ground Fault Circuit Interrupter (GFCI) Requirement - Overseas Construction

The Corps of Engineers Health and Safety Manual, EM 385-1-1, section 11.C.05.a. states: "The GFCI device shall be calibrated to trip within the threshold values of 5 ma +/- 1 ma as specified in Underwriters Laboratory (UL) Standard 943." A variance from USACE has been granted allowing 10 ma, in lieu of 5 ma, for overseas activities that use 220 Volts (V)/50 hertz (Hz) electrical power.

1.28.3 Temporary Power - Electrical Distribution Boxes

EM 385-1-1 section 11.A.01.a. states, "All electrical wiring and equipment shall be a type listed by a nationally recognized testing laboratory for the specific application for which it is to be used." This includes temporary electrical distribution boxes. Locally manufactured electrical boxes will not be allowed. Only manufactured electrical distribution boxes that meet the

European CE requirements, with 10 ma CE type GFCIs installed shall be allowed.

Contractors shall:

a. Make no modifications that might void any CE or manufacturer certification.

b. Test the installed systems to demonstrate that they operate properly and provide the 10 ma earth leakage protection.

c. Ensure GFCIs will have an integral push-to-test function. The testing shall be performed on a regular basis.

d. Check that proper grounding is checked regularly and flexible cords, connectors, and sockets inspected before each use.

1.29 HAZARDOUS MATERIALS

Should the Contractor encounter asbestos or other hazardous materials, during the construction period of this contract, he shall immediately stop all work activities in the area where the hazardous material is discovered. The Contractor shall then notify the Contracting Officer; identify the area of danger; and not proceed with work in that area until given approval from the Contracting Officer to continue work activities. Hazardous material is considered to be asbestos, explosive devices, toxic waste, or material hazardous to health and safety. The Contractor shall secure the area from daily traffic until it is safe to resume normal activities.

1.30 NOT USED

1.31 NOT USED

1.32 NOT USED

1.33 OPERATION AND MAINTENANCE (O&M) DATA

1.33.1 General

The requirements contained herein are in addition to all shop drawings submission requirements stated in other sections of the specifications. The Contractor shall include the provisions for all items required under this clause in all purchase orders and sub-contract agreements. Submittals required hereinafter will not relieve the Contractor of any responsibilities under the Warranty of Construction Provisions of this contract or under the various Guarantee Clauses of the Technical Provisions.

1.33.2 Submittals

The Contractor shall submit all items requiring submission of O&M data under this and other sections of these specifications in accordance with Section 01 33 00.12 10 SUBMITTAL PROCEDURES FOR DESIGN/BUILD PROJECT of the specifications.

1.33.3 Operation and Maintenance (O&M) Data

The Contractor shall furnish operation and maintenance manuals for all facilities constructed under this contract. The manuals shall be loose leaf, indexed and shall consist of manufacturer's brochures, manufacturer's operation and maintenance manuals, service and repair manuals, catalogs, service bulletins, instruction charts, diagrams, other information as necessary to support the operation and maintenance of the end items of equipment, assemblies and systems. Each type of facility (housing, barracks, mosque, etc.) shall be covered by a separate manual (or manuals) consisting of all data pertaining to the equipment and/or systems within that facility. Identical equipment within a single major system shall require only one submittal of data. The Contractor shall furnish all O&M manuals to the Contracting Officer not less than thirty (30) calendar days prior to contract completion. Required number of submittals (number of sets) shall be as specified in Section 01 33 00.12 10 SUBMITTAL PROCEDURES FOR DESIGN/BUILD PROJECT.

1.33.4 Recommend Spare Parts List

The Contractor shall furnish a recommended spare parts list containing equipment manufacturers' recommendations for five (5) years; two (2) years and one (1) year spare parts stock levels in Afghanistan. Current unit price and effective date, lead time, shelf life for each individual part, and total cost of all recommended parts shall be furnished.

1.33.5 Supplemental Submittals of Data

After initial submittal of O&M manuals and until final acceptance of all equipment, the Contractor shall prepare and deliver to the Contracting Officer supplemental technical data as previously described for all changes, modifications, revisions and substitutions to equipment and components. For equipment or systems introduced into the contract under change order, or modified by change order, supplemental data shall be furnished within forty-five (45) calendar days after issuance of the change order. The supplemental data furnished shall be properly prepared and identified for insertion into the O&M manuals.

1.33.6 Framed Instructions for Systems

Approved wiring and control diagrams showing the complete layout of the entire system, including equipment, piping, valves and control sequence, framed under glass or in approved laminated plastic, shall be posted, where applicable, in all mechanical equipment rooms. In addition, detailed operating instructions explaining safe starting and stopping procedures for all systems shall be prepared in typed form along with the inspections required to insure normal safe operations. The instructions shall be framed as specified above for the wiring and control diagrams and posted beside the diagram. Proposed diagrams, instructions, and other sheets shall be submitted for approval prior to posting. Operating instructions shall be posted before acceptance testing of the systems and verified during acceptance testing.

1.33.7 Additional Submittals/Resubmittals

The Contracting Officer reserves the right to determine whether the above specified information, as furnished by the Contractor, is adequate and complete and to require such additional submittals by the Contractor as necessary to insure that adequate information has been furnished to provide

the satisfactory operation and maintenance of the various items of equipment and to fulfill the intent of the specifications. Additional submittals or resubmittals supplementing incorrect or incomplete data shall be made within thirty (30) calendar days after receiving notice by the Contracting Officer. All costs arising from these resubmissions shall be borne by the Contractor.

1.34 NOT USED

1.35 NOT USED

1.36 INSTRUCTIONS AND TRAINING FOR OPERATION AND MAINTENANCE

1.36.1 General

The Contractor shall be responsible for the instruction and training of operating and maintenance personnel as specified below and in the Technical Provisions of the specifications. Unless otherwise indicated in the Technical Provisions, operating and maintenance instructions shall be given for a minimum period as follows:

Title	Duration of Training
Electrical Systems	10 Days

1.36.2 Operation and Maintenance Training

The Contractor shall provide competent instructors for training of personnel designated by the Contracting Officer to operate mechanical and electrical building systems and equipment, perform the required preventive maintenance to minimize breakdown, and to perform necessary repairs when malfunction or breakdown of equipment occurs. Such training shall consist of classroom and on-the-equipment training for the period specified, which shall be completed prior to acceptance of a system or equipment, as applicable. The instructor(s) shall have no other duties during the period of training. Classroom instruction shall not exceed fifty percent (50%) of the total training time, with the balance devoted to on-the-equipment demonstration and familiarization. Emphasis will be given to both electrical and mechanical features, in accordance with approved training plans.

1.36.3 Arrangements

The training shall be for not less than the periods of time specified, five (5) days per week, and eight (8) hours per day, subject to review and approval by the Contracting Officer. Each individual training session shall be presented one time only, shall be video taped in a television system compatible with the local area, and be scheduled in a manner acceptable to the Contracting Officer. At the completion of training, the videotapes shall become the property of the Government. In addition to the Contractor's requirements to video tape each training section, the Government reserves the right to record, in any manner, the subject training material, or training sessions given by the Contractor, without additional cost to the Government. Recordings obtained will be used in future training by the Government. The operating and maintenance manual data, as specified to be furnished in these Special Clauses, shall be used as the base material for training.

1.36.4 Scheduling

The Contractor shall contact the Contracting Officer for the purpose of preliminary planning, scheduling, and coordination of training, to maximize effectiveness of the training program for available operating and maintenance personnel. The Contractor shall initiate and make arrangements for such contact within thirty (30) calendar days after receipt of notification of award of contract; and shall include all significant times in scheduling and completing training in his PROJECT SCHEDULE. The Contractor shall provide a draft outline of training outline in sufficient detail to provide a broad indication of the type of scope of training to be given. It shall include but not be limited to; (a) a list of subjects to be presented; (b) estimated amounts of classroom and on-the-equipment instruction for each subject; (c) a list of minimum qualifications for instructors; and (d) discussions concerning the types and amounts of visual aids, reference materials, tools and test equipment, mock-up and other training materials that will be employed during training.

1.36.5 Preliminary Plan

The Contractor shall submit seven (7) copies of an outline of his proposed training plan to the Contracting Officer for review and approval not later than 60 calendar days after award of this contract. The plan will be reviewed and coordinated with the content of the O&M manuals.

1.36.6 Plan

The Contractor shall submit seven (7) copies of his proposed training plan to the Contracting Officer for approval not later than ninety (90) calendar days prior to start of any training. The plan shall include the following; (a) a weekly outline showing overall form and design of training presentation; (b) a day-by-day schedule showing time intervals, the major and subordinate subjects to be covered in each, the name of the instructor(s) and qualification summary of each, and identification of related handouts; (c) summary of the number of hours of classroom and on-the-equipment training; (d) a list of reference materials to be provided by the Contractor to the trainees; and (e) a list and description of the training materials to be used, such as text, visual aids, mock-up, tools, etc. The Contractor shall be responsible for furnishing all training materials except the following: The Government will provide space, chairs, and tables for classroom training, and three (3) sets of the five (5) sets of O&M Manuals required by the Contractor per Section 01 33 00.12 10 SUBMITTAL PROCEDURES FOR DESIGN/BUILD PROJECT of the specifications. Provision of these manuals is solely for reference purposes, and in no way relieves the Contractor from providing all instruction and materials necessary for training personnel designated by the Government. All costs for resubmission of training plans, training materials, etc., as requested by the Contracting Officer shall be borne by the Contractor. Resubmittals shall be made within twenty (20) days of notice from the Contracting Officer.

1.36.7 Attendance Roster/TAC Form 356

The Contractor shall develop an attendance roster or a similar document indicating each student's attendance, prior to the start of each class, subject and/or topic. This includes both "Hands-On" and classroom training. It is strongly recommended that each student trained be required to sign this document at the beginning of each class day for each and every class, subject

and/or topic taught on that day. The Contractor's failure to have student attendance verified in writing may be cause for the Government to order the Contractor to repeat schooling where evidence of attendance cannot be verified. No part of the time lost due to such repeat instruction shall be made the subject of claim for extension of time or for excess costs or damage by the Contractor. Within ten (10) working days after completion of Operation and Maintenance Training conducted in accordance with this clause and/or applicable Technical Provision section, the Contractor shall complete and submit TAC Form 356 "Operation and Maintenance Training Validation Certificate". The attendance roster shall be included as an attachment to TAC Form 356.

1.37 NOT USED

1.38 NOT USED

1.39 NOT USED

1.40 CONTRACTOR FURNISHED EQUIPMENT LISTS

The Contractor shall furnish a list of all items, other than integral construction type items, furnished under the contract. Items such as furniture, drapes, rugs, vehicles, office machines, appliances, etc., shall fall under this category. The Contractor's list shall describe the item; give the unit price and total quantities of each. Model and serial numbers for equipment shall be provided when applicable. The Contractor shall keep an up-to-date register of all covered items and make this information available to the Contracting Officer at all times. Prior to acceptance, the Contractor shall submit the complete register to the Contracting Officer.

1.41 NOT USED

1.42 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

1.42.1 General

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984. The listing below defines the anticipated monthly unusually severe weather for the contract period and is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the geographic location of the project. The schedule of anticipated unusually severe weather will constitute the baseline for determining monthly weather time evaluations. Upon award of this contract and continuing throughout the contract each month, actual unusually severe weather days will be recorded on a calendar day basis (including weekends and holidays) and compared to the monthly anticipated unusually severe weather in the schedule below. The term "actual unusually severe weather days" shall include days actually impacted by unusually severe weather. The Contractor's schedule must reflect the anticipated unusually severe weather days on all weather dependent activities.

MONTHLY ANTICIPATED UNUSUALLY SEVERE WEATHER CALENDAR DAYS

January	2 Days
February	2 Days

March	2 Days
April thru December	0 Days

1.42.2 Time Extensions

The number of actual unusually severe weather days shall be calculated chronologically from the first to the last day in each month. Unusually severe weather days must prevent work for fifty percent (50%) or more of the Contractor's workday and delay work critical to the timely completion of the project. If the number of actual unusually severe weather days exceeds the number of days anticipated in the paragraph above, the Contracting Officer will determine whether the Contractor is entitled to a time extension. The Contracting Officer will convert any qualifying delays to calendar days and issue a modification in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984.

1.43 NOT USED

1.44 STANDARDIZATION

Where two or more items of the same type or class of product, system or equipment furnished in this project are required, the units shall be products of the same manufacturer and shall be interchangeable when of the same size, capacity, performance characteristics, and rating. The only exception to this requirement is where the items are interchangeable due to conformance with industry standards (valves, fittings, etc.); they need not be by the same manufacturer. This requirement applies to all manufactured items in the project that normally require repair or replacement during the life of the equipment.

1.45 NOT USED

1.46 NOT USED

1.47 NOT USED

1.48 NOT USED

1.49 COMPLIANCE WITH HOST COUNTRY RULES AND CUSTOMS

The laws of Host Country may prohibit access to certain areas of the country that are under military control. The Contractor shall furnish the Contracting Officer the names of personnel, type, and amounts of equipment, dates and length of time required at the site, and the purpose of entering the host country. It is understood that areas to which rights of entry are provided by the Host Government are to be used only for work carried out under the contract and no destruction or damages shall be caused, except through normal usage, without concurrence of the Host Government.

1.49.1 Contractor's Responsibilities

The following items are the sole responsibility of the Contractor to investigate, estimate as to cost, and assume the risk, as normally encountered by Contractors. The Contractor shall be responsible for

determining the effect of the following on his own cost of performance of the contract and for including sufficient amount in the contract price:

a. Official language and type of accounts required to satisfy the officials of the Local Government.

b. Entry and exit visas, residence permits, and residence laws applicable to aliens. This includes any special requirements of the Host Government, including those required by local Labor Offices, which the Contractor may have to fulfill before an application for a regular block of visas will be accepted.

c. Passports, health and immunization certificates, and quarantine clearance.

d. Compliance with local labor and insurance laws, including payment of employer's share of contribution, collecting balance from employee and paying into insurance funds.

e. Strikes, demonstrations and work stoppage.

f. Collection through withholding and payment to local Government, of any Host Country income tax on employees subject to tax.

g. Arranging to perform work in the Host Country, to import personnel, to employ non-indigenous labor, to receive payments and to remove such funds from the country.

h. Operating under local laws, practices, customs and controls, and with local unions, in connection with hiring and firing, mandatory wage scales, vacation pay, severance pay, overtime, holiday pay, 7th day of rest, legal notice or pay in lieu thereof for dismissal of employees, slowdown and curtailed schedules during religious holidays and ratio of local labor employed in comparison to others.

i. Possibility of claims in local bureaus, litigation in local courts, or attachment of local bank accounts.

j. Compliance with workmen's compensation laws and contributions into funds. Provisions of necessary medical service for Contractor employees.

k. Special license required by the local Government for setting up and operating any manufacturing plant in the Host Country, e.g. concrete batching, precast concrete, concrete blocks, etc.

l. Sales within the host country of Contractor-owned materials, and equipment.

m. Special licenses for physicians, mechanics, tradesmen, drivers, etc.

n. Identification and/or registration with local police of imported personnel.

o. Stamp tax on documents, payments and payrolls.

p. Base passes for permanent staff, day laborers, motor vehicles, etc.

q. Compliance with all customs and import rules, regulations and restrictions, including, but not limited to, local purchase requirements.

1.50 NOT USED

1.51 NOT USED

1.52 NOT USED

1.53 IDENTIFICATION OF EMPLOYEE'S PERSONNEL AND VEHICULAR ACCESS TO THE PROJECT SITES

See Appendix A for updated requirements and information pertaining to escorting and badging for Kandahar Airfield (KAF).

The Base Security maintains the ultimate authority for establishing, monitoring, and enforcing security requirements for the Base Security Office. All contractor, subcontractor, or vendor personnel and vehicles at any tier working at any location on the Base are subject to a thorough search upon entering, departing, or at any time deemed necessary by the Base Security Personnel. The Contractor shall be responsible for compliance with all the Base security requirements. The Government reserves the right to deny access or to require the contractor to remove any personnel or equipment deemed to be a threat to the security of the Base Security Office or the Base personnel. The Contractor shall work through the Contracting Officer to ensure that the Base Security Regulations are followed.

1.53.1 Employee Identification

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged on the work, to display identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.53.1.1 Preparation of Identification Badges

The Contractor shall be required to prepare a written application inclusive color photographs and provide all materials and labor necessary to prepare an identification badge, laminated in plastic, containing the employee's name, badge number, color photo, height and weight, the name of the Contractor's organization and for requiring each employee engaged on the work to display this identification as directed by the Contracting Officer. The Contractor shall submit each application and draft badge through the Contracting Officer to the Base Security Office. A minimum of thirty-five workdays shall be allowed for Government review and certification of badges. The Base Security Office will certify each draft badge by signature, stamp, seal or any combination thereof. Upon certification by the Base Security Office, the badges will be returned to the Contractor for final preparation, lamination, and issuance. Badges shall not be taken out of country during periods of travel or absence. During such periods, the Contractor may be permitted to issue temporary identification badges.

1.53.1.2 Employee Background and Historical Information

The Contractor shall be required to prepare and maintain personal background and historical information forms on each employee. These forms may be reviewed by the Base Security Office. The required information shall include but not necessarily be limited to the following:

a. Full name.

b. Place and date of birth.

c. Three (3) current color photographs.

d. Copy of Citizenship/Nationality identification.

e. Copy of Passport.

f. Copy of driver's license.

g. Police Background Check.

h. Work History.

i. Personal background information.

j. Copy of Work Permit and/or Visa.

k. Permanent home of record and in-country address.

l. Other information mandated by local law, the Base Security Regulations or that may be required to coordinate and process the necessary documentation with the government offices responsible for the approval.

m. Registration, insurance company, policy number and expiration date for each vehicle.

1.53.2 Identification of Contractor Vehicles

The Contractor shall be responsible for requiring each vehicle engaged in the work to display permanent vehicular identification as approved and directed by the Contracting Officer. If acceptable to the Base Security Office and approved by the Contracting Officer, the Contractor may institute a system of non-permanent temporary identification for one-time delivery and transit vehicles. Each Contractor vehicle, machine, piece of equipment, or towed trailers, shall show the Contractor's name such that it is clearly visible on both front doors of the vehicle and both sides of a towed trailer. A valid license plate shall be displayed at all times. Contractor vehicles operated on Government property shall be maintained in a good state of repair, shall be insured, and shall be registered in accordance with Afghan Law.

1.53.3 Security Plan

The Contractor shall submit to the Contracting Officer, within ten (10) calendar days after award of this contract, his proposed personnel and vehicular access plan. This plan shall cover all elements for issuance of the access passes, safeguarding of unissued passes, construction security

operations, lost passes, temporary vehicle passes, and collection of passes for employee's and vehicles on 1)- temporary absence; 2)- termination or release; and 3)- termination or completion of contract. The plan shall address in detail the contractors proposed procedures, and organization necessary to produce and maintain effective security within the contract limits twenty-four (24) hours a day seven (7) days a week.

1.54 ESCORTS (REVISION 1)

For construction, the contractor shall be responsible for providing one (1) escort for every five (5) workers without ISAF badges for the entire work day at Kandahar Airfield Base (KAF). One (1) escort is required for every four (4) vehicles.
Escorts must speak English and must be an ISAF badge holder and have attended the Escort Training Class conducted by COMKAF. ISAF badges can be obtained with a passport and security clearance or national police background check for contractor’s with a construction contract to demonstrate necessity for access. It will take several weeks to obtain a badge without an existing clearance or existing background check.
Entry Control Point Number Three opens at 7:00 a.m. and close at 5:30 p.m. for entry into KAF for all Local National workers. Local nationals are permitted on KAF only during these hours.
Third Country National (TCN) badges are equivalent to a CAC badge. Local Nationals may obtain an ISAF badge if sponsored as a Trusted Agent by a host country and meet all requirements.
Additional information is available from the COMKAF (Commander, Kandahar Airfield) Security Officer.

1.55 RADIO TRANSMITTER RESTRICTIONS

To preclude accidental actuation of sensitive electronic equipment, the Contractor shall not use radio-transmitting equipment without prior approval of the Contracting Officer.

1.56 ON-BASE PHOTOGRAPHY PROHIBITION

The Contractor shall not engage in any form of photography without prior written approval from the Contracting Officer.

1.57 PUBLIC RELEASE OF INFORMATION

1.57.1 Prohibition

There shall be no public release of information or photographs concerning any aspect of the materials or services relating to this bid, contract, purchase order, or other documents resulting there from without the prior written approval of the Contracting Officer.

1.57.2 Subcontract and Purchase Orders

The Contractor agrees to insert the substance of this clause in all purchase orders and subcontract agreements issued under this contract.

1.58 PROCEDURES FOR BRINGING MATERIAL ONTO BASE

1. The Contractor needs to provide the Corps with the following information prior to bringing materials onto base:

a. Date materials / tools / equipment are to be delivered to base

b. A precise list of materials / tools / equipment the Contractor is delivering to base

c. Driver name(s) of delivery trucks / equipment

d. Information on delivery trucks / equipment, i.e. make, model, license plate, number, picture, etc …

e. Tazkera numbers of driver(s)

2. Once this information is provided to the Corps, preferably three days in advance, Commander Davis, COMKAF Security Officer, has to sign off on it. Once it has been approved, four copies will be made. Keep the original one on-file.

3. If the Contractor plans on bringing in materials / tools / equipment for an extended time-period, i.e. one or two weeks, a letter can cover the time-period as long as, all materials / tools / equipment and associated dates are known, the driver(s) do not change and the delivery vehicles do not change.

4. The ECP-3 commander can sign off on letters if the Contractor plans on hand-carrying in samples, tools, etc …

5. Before Contractor plans on bringing in materials / tools / equipment through ECP-3, either via hand-carrying or delivery truck, they need to have one of the signed, original letters in their possession.

6. Every time a Contractor wants to bring materials / tools / equipment on-base, they need a letter.

7. When a Contractor wants to bring materials / tools / equipment off-base, they will also need a letter, which follows the same procedures above.

1.59 NOT USED

1.60 NOT USED

1.61 NOT USED

1.62 NOT USED

1.63 NOT USED

1.64 NOT USED

1.65 NOT USED

1.66 ATTACHMENTS

APPENDIX A - Escorts and Badging Requirements

TAC FORM 356 - Operation and Maintenance Training
Validation Certificate

-- End of Section --

018000.1210 - TECHNICAL REQUIR

SECTION 01 80 00.12 10
TECHNICAL REQUIREMENTS

PART 1 GENERAL

1.1 Contractor's Design and Construction

The Contractor's design and construction must comply with technical requirements contained herein. The Contractor shall provide design and Fconstruction using the best blend of cost, construction efficiency, system durability, ease of maintenance and environmental compatibility.

1.1.1 Design and Product Requirements

These design and product requirements are minimum requisites. Variations shall be submitted in accordance with Section 01 33 00.12 10 entitled SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECT. All variations must be approved by the Contracting Officer. Unless otherwise specified, all of the materials and equipment to be installed in this project shall comply with a recognized standard for the intended use. The Unified Master Reference List for ASTM, ASME, etc., located at www.ccb.org/docs/ufgshome/ufgstoc.htm identifies the titles and approval dates.

1.1.2 Asbestos Containing Materials

Asbestos containing material (ACM) will not be used in the design and construction of this project. If no other material is available which will perform the required function or where the use of other material would be cost prohibitive, a waiver for the use of asbestos containing materials must be obtained from the Contracting Officer.

1.1.3 Subcontractors

Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

1.2 Specifications

All specifications except for those included in this RFP shall be developed by the Contractor in accordance with Section 01 80 00.12 10 and Section 01 33 00.12 10. The specifications included in this RFP shall be used verbatim and not edited by the Design-Build Contractor.

1.3 Site Conditons

(a) Site Location: Kandahar Airfield, Kandahar, Afghanistan.
(b) Site Elevation: 1010 Meters, Above Sea Level.
(c) Ambient Temperatures: Summer 43.3 degree C; winter -5.0 degree C.
(d) Maximum 43.3 degrees C dry bulb, 23.9 degrees C wet bulb.

(e) Atmospheric Conditions: Dry and Dust-laden.

2. CIVIL AND SITE DEVELOPMENT

2.1 General.

The contractor shall perform design and construction services as required to provide a complete and usable site at the location shown on the drawings. The site requires some demolition, access roads, connection of utilities, and a fire suppression system with water capacities as indicated in the following sections.

The civil site development includes the following items of work:

a. Topographic Survey

b. Environmental Protection

c. Demolition

d. Utility Infrastructure - Design & Construct

e. Grading and Drainage - Design & Construct

f. Pavements and Siting - Design & Construct

2.2 Drawings.

The RFP drawings include a general site plan, mobilization yard, demolition, pavement design and required utility details. The site plan provided in the RFP indicates approximate existing conditions and shall be verified by the contractor with a complete topographic survey of the site prior to starting design.

Existing and proposed utility locations are subject to verification by the Contractor and approval of the CO.

2.3 Design Criteria.

Transatlantic Program Center Design Instructions Manual, Sep 2000

24-hour Precipitation, Extreme Value Analysis for Kandahar Air Base Afghanistan by Air Force Combat Climatology Center. https://www2.afccc.af.mil/forms_mil/html/sarform.html

Pavement-Transportation Computer Assisted Structural Engineering (PCASE) Program, v2.08. http://www.pcase.com

UNIFIED FACILITIES CRITERIA (UFC)

Uniform Facility Criteria (UFC) documents are available on the Internet at http://www.hnd.usace.army.mil/techinfo/engpubs.htm

UFC 3-210-01A Area Planning, Site Planning, and Design

UFC 3-210-06A Site Planning and Design, Jan 06

UFC 3-230-01 Surface Drainage Design, Aug 06
(FAA AC150/5320-5C)

UFC 3-230-06A Subsurface Drainage Design, Jan 04

UFC 3-210-02 POV Site Circulation and Parking, Jan 04

UFC 3-250-01FA Pavement Design for Roads, Streets, Walks and
Open Storage Areas, Jan 04

UFC 3-250-3 Standard Practice Manual for Flexible Pavements, May 01

UFC 3-250-04FA Standard Practice Manual for Concrete Pavements, Jan 04

UFC 3-250-07 Standard Practice for Pavement Recycling, Jan 04

UFC 3-250-08FA Standard Practice for Sealing Joints and Cracks in
Rigid and Flexible Pavements, Jan 04

UFC 3-250-11 Soil Stabilization for Pavements, Jan 04

UFC 3-250-18FA General Provisions and Geometric Design for Roads, Streets,
Walks, and Open Storage Areas, Jan 04

UFC 3-260-01 Airfield and Heliport Planning and Design, Nov 08

UFC 3-260-02 Pavement Design for Airfields, Jun 01

UFC 3-260-05A Marking of Army Airfield-Heliport O&M Facilities, Jan 04

UFC 3-600-01 Fire Protection Engineering for Facilities, Sept 06

ARMY CORPS ENGINEERING AND CONSTRUCTION BULLETIN (ECB)

ECB 2008-11 Marking of Airfield-Heliport O&M Facilities, Mar 08

AIR FORCE ENGINEERING TECHNICAL LETTER (ETL)

ETL 01-20 Guidelines for Airfield Frangibility Zones, Nov 01

ETL 02-15 Fire Protection Engineering Criteria Letter New
Aircraft Facilities, Dec 02

ETL 04-02 Standard Airfield Pavement Marking Schemes, Jul 04

AIR FORCE TECHNICAL LETTER (TL)

TL 04-4-1 Trenchless Technology (TT) for Crossing Air
Force Pavements, Mar 04

AIR FORCE TECHNICAL INSTRUCTION (AFI)

AFI 32-1042 Standards for Marking Airfield, Oct 05

ARMY TECHNICAL INSTRUCTION (TI)

TI 8-222-08 Standard Practice Manual for Flexible Pavements, May 99

ARMY FIELD MANUAL (FM)

FM 5-430-00-2 Planning and Design of roads, airfields and Heliports in the Theater of Operations - Airfield and Heliport Design, Jan 06

ARMY ENGINEERING TECHNICAL LETTER (ETL)

ETL 1110-3-394 Aircraft Characteristics for Airfield-Heliport Design and Evaluation, Sept 91

AMERICAN CONCRETE INSTITUTE (ACI)

ACI 318 Building Code Requirements for Structural Concrete, 2005

ACI 305R Hot Weather Concrete, 1999

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7 Minimum Design Loads for Buildings and Other Structures, 2005

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 615 Deformed and Plain Billet-Steel Bars for Concrete Reinforcement, 2008

ASTM A 185 Steel Welded Wire Fabric, Plain for Concrete Reinforcement, 2007

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC 325 Steel Construction Manual, 13th Edition

INTERNATIONAL CODE COUNCIL INCORPORATED

IBC International Building Code, 2006

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 415 Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, 2008

USCENTCOM FORCE PROTECTION STANDARDS

OPORD 05-01 Force Protection Construction Standards (Appendix V)

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

AASHTO HS20-44 LRFD, Specifications for Highway Bridges, 2008

2.4 Studies Supporting the Final Design

To accomplish the work contained in this RFP, the contractor is required to publish design studies to document the existing site conditions before proceeding with the design and construction of the facilities and pavements. Included in this work are a topographic survey, a geotechnical survey and a hydrologic study. Report formats are listed in Section 01 33 00 12.10 SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECT.

2.4.1 Site Survey.

Following the criteria in Appendix "A" of this section and submitted in accordance with Section 01 33 00 12.10 SUBMITTAL PROCEDURES FOR DESIGN-BUILD and attachments to Appendix "A" of this section, a survey shall be produced of the project site. A listing of known benchmarks is contained in Attachment 3 of Appendix "A".

Upon completion of the construction, the original survey shall be updated with an as-built survey of the site as constructed. The as-built survey shall be submitted to the COR for approval.

The original and as-built survey shall include location and elevation of all relevant existing site features within the project limits. This includes the elevation and location of buildings (new and existing), roadways, pads, other structures, drainage systems, and utilities (subsurface and overhead) within 5 meters of the project sites.

2.4.2 Hydrologic Study

The Contractor shall investigate and assess the adequacy of the existing drainage systems to handle the runoff from the drainage areas that surround the project sites.

The contractor shall use the provided topographic data and hydrologic reports to model stream channels with USACE HEC I&II software. 24-hour Precipitation values are provided in Appendix "B".

The Contractor shall analyze the 10-year and 100-year storm event and determine the ponding volumes, areas and elevations. The Contractor shall calculate in tabular form the hydraulic grade line (HGL) as described in UFC 3-230-101 section 6-4. If the 100-year storm event results in ponding in excess of criteria, storm water detention shall be provided as necessary to meet pending criteria. Detention shall be located away from the airfield to the extent possible.

2.4.3 Geotechnical Study

The Contractor shall produce a detailed geotechnical report containing the field exploration and testing results, laboratory testing results, evaluations, recommendations, calculations and descriptive supporting text. Information in the report shall include, but not be limited to: existing geotechnical (e.g., surface and subsurface) conditions, location of subsurface exploration logs, exploration point, foundations selected, bearing capacity, pavement design criteria (e.g., CBR values, K Values), ground water levels, and construction materials (e.g., concrete cement, asphalt and aggregates). Two copies of the detailed geotechnical report shall be

submitted to the Contracting Officer. Additional requirements are contained in paragraph 5.0 below.

2.5 Environmental Protection

2.5.1 Applicable Regulations

The Contractor shall comply with all laws, rules, regulations or standards concerning environmental pollution control and abatement at Kandahar Airfield.

2.5.2 Notification

The Contracting Officer will notify the Contractor in writing of any observed non-compliance with the paragraph entitled ENVIRONMENTAL PROTECTION. The Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No extension of time or damages will be awarded to the Contractor unless it was later determined that the Contractor was in compliance.

2.5.3 Spillages

Measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, herbicides and insecticides, and construction materials from polluting the construction site and surrounding area.

2.5.4 Disposal

Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc., shall be subject to the approval of the Contracting Officer. Burning at the project site for the disposal of refuse and debris will not be permitted.

2.6 Hazardous Materials and Contamination

The Government does not anticipate that the Contractor will be required to remove or dispose of any hazardous materials or waste during the site preparation phase of this project.

2.7 Demolition and Removal.

The Contractor shall stake-out the project boundaries before starting work. Existing utilities that interfere with this project will be relocated. Any demolition debris shall be removed from the site. The COR will designate a site off base. At all times during demolition the integrity of the flight line perimeter shall be maintained through the use of suitable temporary protective measures in any areas where existing fence has been removed and new fence is not complete.

Rubbish and debris shall be removed daily, unless otherwise directed, to avoid accumulation at the demolition site, do not allow accumulations inside or outside the buildings.

In the interest of occupational safety and health, the work shall be performed in accordance with EM 385-1-1, Section 23, Demolition and other applicable Sections. In the interest of conservation, salvage shall be pursued to the maximum extent possible. Use of explosives will not be permitted.

Saw cut and remove concrete and asphaltic concrete paving and slabs including aggregate base as necessary. Provide neat saw cuts at limits of pavement removal as necessary. Pavements shall be removed in a manner such to ensure no damage to adjacent existing pavements that will remain in place. Debris shall be removed and transported in a manner that prevents spillage on streets or adjacent areas.

2.8 Excavation

Any hand digging, driving of pickets or excavation of any kind requires a Dig Permit. If work requires digging, the Contractor must obtain a digging permit from the Contracting Officer.

When digging must be done, backfill the resulting hole/trench with clean fill or material as described in the Government provided specification or Contractor provided specification as applicable, at the earliest opportunity. If digging is to be done manually, then the Contractor must submit Site Specific Safety and Health Plan (SSHP) which meets EM 385-1-1, Section 28.

2.9 New Site Design and Construction.

The concept site plan drawings present a suggested geometric layout for the Phase II site work. The Contractor shall design each of the site features shown on the Site Plan and otherwise specified in the RFP. This site plan includes the approximate location of the proposed apron and existing features that were to be constructed as part of the Phase I construction. This schematic design must be verified by the contractor.

The Contractor shall ensure the facilities are sited in compliance with the attached drawings and additional requirements stated herein.

Airfield pavement geometrics shall be in accordance with UFC 3-260-01, FM 5-430-00-2 and ETL 1110-3-394 and other manufacturer's manuals. Vehicle pavement geometrics shall be in accordance with UFC 3-210-02. The design aircraft for this site's geometric properties shall be the UH-60, AH-64, CH-47, CH-53 and CH-54 following ETL 1110-3-394.

The site plan prepared by the Contractor shall show geometric design of the site, including applicable dimensions of nearby facilities, taxi lanes, aprons, pavements, equipment shelters, set back lines, fences, etc.

At all times during construction the integrity of the flight line perimeter shall be maintained through the use of suitable temporary protective measures in any areas where existing fence has been removed and new fence is not complete.

2.10 Utilities.

There may be existing electric, communications and other utility lines on, around and under the project sites. It is the Contractor's responsibility to

confirm the specific locations of the existing utilities and to design, adjust or protect utility services in the project sites. Coordination of all site work on the project, including utility work, is the responsibility of the Contractor. Follow requirements of part 2.7 "Demolition and Removal", this section when adjusting utilities.

2.10.1 Water Distribution

Fire water in quantity and pressure shall be provided by extending an existing network supplied by the pump station and storage tanks included in Phase I of this project. Fire hydrant leads shall be designed to distribute from this network.

Fire water distribution and fire hydrants in the project site shall follow specification section 33 11 00 WATER DISTRIBUTION.

Fire hydrant placement and number shall be in compliance with ETL 02-15 and UFC 3-600-01. See paragraph 8.0 below for further specification of fire protection components.

2.10.2 Sanitary Sewer Collection

Not Applicable

2.10.3 Electrical Distribution

The Contractor shall bring electrical and communications distribution to service the facilities placed within this project. See paragraph 9 below and associated drawings for more details. Proposed above ground utility structures shall conform to airfield wing tip and imaginary surface clearance requirements of UFC 3-260-01.

2.11 Utility Trenches & Conduits.

Electric and communications line depth, bedding, and cover shall be designed as required by the UFC design criteria for line size, material, and vehicular loading. Utilities placed in traffic areas shall be designed for the greater of an AASHTO H20 vehicle loading or the wheel loading imposed by the design aircraft. Locater's tape shall be placed above the utility and 300mm below finished grade. Trench backfill shall be compacted to at least 95% maximum density.

Any adjustment to communication utilities shall be replaced with a minimum of four (4) concrete encased 110mm PVC. The conduits shall be in a 2x2 configuration with 52mm of space between the conduits and 100 mm concrete around the duct bank. The conduits shall be DB 60, DB 120 or Schedule 40. The minimum cover over the top of the concrete shall be 762mm. Conduit in no case shall interfere with planned gravity sewer systems. Cap empty conduit. Place conduit at other proposed pavement intersections on this site to provide crossing points for future communications wiring at the site. Extend conduit 1 meter beyond compacted subgrade toe on either side of road crossings.

All utility borings under existing pavements shall be accomplished by dry boring, auguring or jacking following Contractor's submitted specifications, and under guidance from Air Force Technical Letter (TL) 04-4-1. All other

excavations shall be accomplished by methods approved by the Contracting Officer.

2.12 Earthwork, Site Grading and Off-site Drainage

2.12.1 Earthwork

Perform all earthwork necessary to provide apron pads and taxiways that meets UFC requirements for taxiway aprons and provides access from the surrounding airfield by design vehicles.

2.12.2 Site Grading.

Finished grade shall slope away from the project sites and provide positive drainage. Swales and cross-culverts shall be provided as required and have a minimum longitudinal gradient of 0.5% with an absolute minimum of 0.3%. Side slopes of swales within the infield shall follow UFC 3-260-01 criteria.

The finished grade adjacent to future facilities and equipment shelters shall be designed to slope away from the structure at a rate of 2%.

The apron shall be designed to match the elevation of the adjoining apron and taxiway along its entire length.

Plans shall show existing contours and new contours to indicate new grading, finished floor and pavement elevations, drainage swales, etc.

2.12.3 Storm Drainage

2.12.3.1 Storm Drainage.

The Contractor will provide necessary site grading and provide drainage structures to ensure adequate drainage, so that no water shall pond within 23 meter of any paved area or building resulting from a 10-year recurrence storm and no water shall pond within 8 meters of the runway resulting from a 100-year recurrence storm.

All storm drainage system designs shall be in accordance with references contained herein. Storm drainage system design shall consist of swales, side slopes, and culvert piping where necessary to provide adequate drainage for the project sites. All storm drainage piping located in traffic areas shall be rated to withstand wheel loading from the design vehicle.

Detention basins, if needed shall have side slopes not steeper than 4:1 (horizontal:vertical). Erosion control measures using rock, geotextiles, or other materials shall be included as required to stabilize erodible soil conditions. Provide aggregate blanket at the base and side slopes of detention ponds. The aggregate shall be crushed stone, 35 mm to 50 mm across, applied 50 mm deep. Detention sites located near subsurface utilities shall ensure they are protected from infiltration inflows with devices such as manhole seals and/or pond liners.

Design flows for storm sewers shall produce velocities suitable to flush collected dust and debris accumulation during storm events.

Minimum gravity storm sewer requirements are contained in specification Section 33 40 00.00 40 - STORM SEWERAGE. Unless otherwise directed by the CO, the contractor shall use reinforced concrete pipe exclusively.

2.12.3.2 Airfield Drainage

Aircraft parking apron shall have an interior system of inlets and storm water drains. The apron cross-section shall be designed such to minimize the amount of storm water draining through aircraft parking locations.

a) The storm water facilities for an apron that will experience fueling operations shall be designed and constructed in conformance with NFPA Standard 415. Storm sewers shall not have bituminous coatings and sewer joints shall be sealed with fuel resistant, water-tight neoprene or rubber sealants. The storm drain for a fueling apron shall be separate from airfield drainage and convey the flow through a fuel spill containment facility.

b) Aprons shall have a system of interior inlets. Provide trench drains and holding tank with float valve to capture 15 minute runoff from the Design Storm.

c) Aprons shall be sloped such that the maximum depth of ponding at an inlet shall be 225 mm before sheet flow of storm water off the apron occurs. Side slopes of swales within the infield shall follow UFC 3-260-01 criteria.

2.12.3.3 Non-Airfield Drainage

The topographic survey shall be used in designing the grading and drainage. The Contractor will provide all necessary site grading to ensure adequate drainage so that no utilities or manholes, facilities or pavements will be flooded due to a design rainfall. Drainage of the area should be compatible with the existing terrain.

2.14 Pavement Marking, Markers and Signage

2.14.1 Airfield Pavement Marking
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Pavement marking is required on all airfield pavements in conformance with the ETL 04-02, AFI 32-1042, UFC 3-260-05A, ECB 2008-11 and specification Section 32 17 24 PAVEMENT MARKINGS and as shown on the drawings. Runway thresholds shall be marked following ECB 2008-11. Stop blocks shall be painted at aircraft parking positions to indicate the intended location for the aircraft nose wheel when parked. Static ground points shall be marked per the drawings. All markings on concrete shall be outlined with black paint, which shall extend at least 150 mm beyond the outside edge of the markings.

2.15 Tiedown & Grounding Points

2.15.1 Tiedown Points

Tiedown points shall be constructed in accordance with UFC 3-260-01 Figure B11-14 and 15 and Specification 34 73 13 AIR FORCE TIEDOWN, ARMY MOORING AND GROUNDING POINTS FOR AIRCRAFT.

For maximum flexibility, they may be placed in 4.6-meter (15-foot), 6.1-meter (20-foot), or a 9.1-meter (30-foot) grids, or offset grids. At minimum, place tiedowns as indicated in aircraft Technical Orders.

2.15.2 Static Grounding Points

Static grounding points shall be constructed in accordance with UFC 3-260-01, and Specification 34 73 13 AIR FORCE TIEDOWN, ARMY MOORING AND GROUNDING POINTS FOR AIRCRAFT. Every static grounding point shall be interconnected to other static grounding points and other grounding systems, in addition to complying with the static grounding requirement. If tiedowns are intended to also be used as static grounds, it is required that a ground rod be installed. When a ground rod is included, bond it to the tiedown bar.

2.16 Airfield Pavement Design

Unless otherwise stated in the contract documents, all airfield pavements shall be designed in accordance with the references included in paragraph 2.3 Design Criteria and the geotechnical investigation required in paragraph 5.0 below, entitled "Geotechnical Investigation and Report". All airfield pavements shall be designed in accordance with the Pavement-Transportation Computer Assisted Structural Engineering (PCASE) program. The PCASE program can be found on the Internet at www.pcase.com. All airfield pavements except for the shoulders shall be designed as rigid (Plain Concrete Pavements) pavement with a minimum of 150 mm of graded crushed aggregate base course. The shoulders shall be design a flexible (asphalt) pavement with a minimum of 150 mm of graded crushed aggregate Base Course. All airfield pavements shall be designed for "Army Class II- Heliport (IFR)". The minimum airfield pavement thicknesses shall be as shown on the drawings. The material used for constructing the airfield pavements shall be in accordance with the specifications of this contract. These specifications shall be used verbatim and not edited by the Design-Build Contractor. The design of the pavements shall be submitted for review to the Contracting Officer prior to any construction. Rigid pavements shall be plain-jointed concrete pavement with compression joint seals in accordance with Specification 32 13 73 COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS.

2.17 Airfield Blast Deflectors, Barrier Walls and Revetments

2.17.1 Barrier Walls

Barrier wall, if required, shall be constructed of a minimum of reinforced concrete traffic barrier of design equal or greater than shown in Appendix "C". Concrete and steel shall conform to paragraph 4.0 below. Barrier wall placement shall be designed following the requirements of UFC 3-260-01 Appendix B, Section 7.

2.17.2 Revetments

Revetment construction shall consist of earth-filled steel bins or non-woven polypropylene geo-textile earth-filled bags. Geometric and blast resistant properties of revetments shall conform to DOD 6055.9-STD and DAPAM 385-64.

Earth-filled steel bins shall conform to Armco Steel Bin Revetment types A-1, B-1 or equal. Non-woven polypropylene geo-textile earth-filled bags shall

conform to HESCO Concertainer products or equal. Earth infill shall conform to satisfactory materials following specification 31 00 00 Earthwork.

The height of the revetments for the Rotary Wing Apron shall be dependent on a geometric calculation following DA PAM 385-64 Figure 8-2 and shall in no case be less than 2.2m.

3. ARCHITECTURAL - NOT USED

4. STRUCTURAL - NOT USED

5. GEOTECHNICAL INVESTIGATION AND REPORT

5.1 Site Specific Information

Site specific geotechnical information necessary to design and construct the foundations, pavements and other geotechnically related items contained in this project shall be the Contractor’s responsibility. The US. Army shall furnish a preliminary Geotechnical soils investigation report to the Contracotr for his use. The Contracotr shall perofrm his own confirmatory investigation during the construction as stated in the solicitation. The Contractor shall determine all necessary geotechnical conditions by appropriate field and laboratory investigations and supporting calcualtions. However, as a minimum for structures, the contractor shall advance Three (3) borings within the building footprint of any major structure and Three (3) test pits within the building footprint of any minor structure. The depths of these explorations shall be sufficient to determine the subsurface conditions within the influence of the structures foundation system. For purposes of this paragraph, a major structure is any structure that meets any of the following criterion: a) reinforced concrete framed structures with a build footprint in excess of 1,000 sq.m., b) steel framed structures with a building footprint in excess of 3,000 sq.m., c) a structure that has a height equal to or greater than one and half stories, d) steel or concrete tanks is excess of 350 cubic meters. A minor structure is any structure that does not meet any of the four major structure criteria above. As a minimum for airfield pavements, the contractor shall excavate three (3) test pits for pavements less than or equal to 5,000 sq. m. and one (1) test pit for each additional 5,000 sq.m. of pavement or fraction thereof. As a minimum for all other pavements, except roads, the contractor shall excavate three (3) test pits for pavements less than or equal to 7,500 sq. m.and one (1) test pit for each additional 5,000 sq.m. of pavement or fraction thereof. As a minimum for roads, the contractor shall excavate three (3) test pit for pavements less than or equal to 200 linear meters and one (1) test pit for each additional 200 linear meters or fraction thereof.

5.2 Geotechnical Report

The Contractor shall produce a detailed geotechnical report containing the field exploration and testing results, laboratory testing results, evaluations, recommendations, calculations and descriptive supporting text. Information in the report shall include, but not be limited to: existing geotechnical (e.g., surface and subsurface) conditions, location of subsurface exploration logs, exploration point, foundations selected, bearing capacity, pavement design criteria (e.g., CBR values, K Values), ground water levels, and construction materials (e.g., concrete cement, asphalt and aggregates). Five (5) hard copies and two (2) soft copies (PDF Format)

copies of the detailed geotechnical report shall be submitted to the Contracting Officer.

5.3 Geotechnical Qualifications

All geotechnical engineering design parameters shall be developed by a geotechnical engineer or geotechnical firm responsible to the Contractor. The geotechnical engineer or geotechnical firm shall be qualified by: education in geotechnical engineering; professional registration; a minimum of ten (10) years of experience in geotechnical engineering design.

5.4 Design Certification

The contractor shall certify in writing that the design of the project has been developed consistent with the site-specific geotechnical conditions. The certification shall be stamped by the geotechnical engineer or geotechnical firm and shall be submitted with the final design.

6. MECHANICAL - NOT USED

7. PLUMBING - NOT USED

8. FIRE PROTECTION

8.1 Fire Protection, Rotary Wing Ramp and Taxiway Phase 2, Kandahar, Afghanistan

8.1.1 General

Facility construction and fire protection systems shall be installed in accordance with the publications listed below and the publications referenced therein. Where a conflict occurs among the various criteria, the more stringent requirement shall take precedence.

Unified Facilities Criteria (UFC) 3-600-01, Fire Protection Engineering for Facilities. 26 September 2006

Engineering Technical Letters (ETL)

ETL 02-15 Fire Protection Engineering Criteria - New Aircraft Facilities.

Codes and Standards of the National Fire Protection Association (NFPA) 2007 edition (Individual standards may carry earlier edition dates.). These include, but are not limited to:

NFPA 10, Portable Fire Extinguishers, 2007 edition

NFPA 20, Installation of Stationary Pumps, 2007 edition

NFPA 22, Water Tanks for Private Fire Protection, 2003 edition

NFPA 24 Private Fire Service Mains and Their Appurtenances, 2007 edition

NFPA 70, National Electrical Code, 2005 edition

NFPA 101, Life Safety Code, 2006 edition

Factory Mutual (FM) Approval Guide, Fire Protection, 2007 edition

Underwriters Laboratories (UL) Fire Protection Equipment Directory, 2007 edition

8.1.2 Life Safety. Facilities features shall be provided in accordance with NFPA 101 to assure protection of occupants from fire or similar emergencies.

8.1.3 Fire Protection Equipment. All fire protection equipment shall be currently listed by Underwriters Laboratories (UL) or approved by Factory Mutual (FM); or equivalent subject to the approval of the Contract Officer.

8.1.4 Water Supply for Fire Protection. A system of water storage and distribution shall be provided to meet the maximum calculated fire demand for the duration required. The water system shall comply with UFC 3-600-01, ETL 02-15, and applicable NFPA standards. A Fire Flow of 1893 l/min (500 gpm) with a minimum 20 psi residual pressure shall be provided.

8.1.4.1 The quantity of water storage is based upon the assumption that there will be only one fire at a time. Size water storage tanks to provide flow duration as required. Provide 10% ullage. Tank capacity shall be the greater of 30,000 gallons each, or as required by hydraulic calculations.

8.1.4.2 The water distribution system shall include ductile iron underground distribution piping, sectional control valves, underground fire service piping to fire suppression and standpipe system. Installation shall comply with NFPA 24, Private Fire Service Mains.

8.1.4.3 A minimum of two fire water storage tanks with water distributed as equally as is practical shall be provided.

8.1.4.4 The water distribution system shall be protected from frost.

8.1.5 Fire Pumps. Fire pumps shall be installed in accordance with NFPA 20, Standard for the Installation of Centrifugal Fire Pumps. Vertical shaft turbine pumps shall be used where suction lift is required. Fire pumps shall be housed in a pump house.

8.1.5.1 Fire pump drivers shall be soft start electric motor.

8.1.5.2 A minimum of two fire water pumps shall be provided.

8.1.5.3 The maximum fire pump capacity rating shall be 2,500 gpm. Pump pressure ratings shall be selected so the maximum pressure maintained on the system does not exceed 1035 kPa (150 psi).

8.1.5.4 A pressure maintenance or jockey pump shall be provided to maintain pressure in the fire protection piping system as specified in NFPA 20.

8.1.5.5 Fire pumps shall be arranged for automatic starting upon pressure drop within the fire protection piping system. Fire pumps shall also start upon a manual start signal from the base fire dispatch center.

8.1.5.6 The Fire Pump building shall be a minimum of 11m x 7m x 4m high. Exhaust, cooling, ventilation, and air intake configuration shall be as determined by the fire pump and fire pump driver supplier.

8.1.6 Fire Hydrants.

Fire hydrants shall be located at 91 meter (300 foot) maximum intervals around the accessible side(s) of the apron.

8.1.7 Water Supply and Distribution System.

A water supply storage and distribution system which is part of Contract #W912ER-09-C-0014, Rotary Wing Phase I and Contract W912ER-09-C-0014, ISR Ramp may be able to supply the required water flow and pressure for fire protection on this project. It shall be the responsibility of the contractor to determine whether a new and dedicated system of water storage tanks and fire pumps, or the Phase I water supply and distribution system, or a combination thereof is the most advantageous and efficient method to supply the required fire protection water for this project.

8.1.8 Portable Fire Extinguishers

Wheeled extinguishers employing a minimum 100 lbs of potassium bicarbonate dry chemical shall be supplied for aprons for the maximum extinguishing capability of Classes B and C type fires.

9. ELECTRICAL

9.1 SCOPE OF WORK

The Contractor shall design, supply all electrical materials, and construct the Rotary Wing Ramp and Taxiway Phase II at the Kandahar Airfield, Afghanistan. This includes but is not limited to, all consumables, trade tools, construction equipment and test equipment needed to result in a fully functional electrical system required for reliable operation of this project.

This project is an expansion and extension of Phase I and the Contractor shall fully integrate Phase I and Phase II electrical components.

The systems shall be designed and constructed by the Contractor in accordance with the applicable codes and standards listed herein and the standards referenced in the listed specifications.

The Contractor shall design, construct and procure all electrical facilities:

- in the bid documents, as described and/or listed in this Contract and, good engineering practices, to deliver fully functional electrical systems required for reliable operation of this project.

- in accordance with the applicable codes, standards and publications listed herein and the standards referenced in those listed documents.

Refer to the Civil Site Plans for the proposed layout and details for this site.

The contractor shall provide complete electrical design services which include, but are not limited to:
- calculations

- schematics and one lines

- construction drawings

- specifications for the electrical systems

The Contractor is responsible:

- for identifying and providing the electrical systems needed for a complete and operational facility to adequately support the Contract requirements.

- for providing facilities to support the expected electrical loads and functions of this project.

- for obtaining all construction permits from local and national agencies, needed to proceed with construction in a timely manner.

- for the design and selection of all materials and equipment being submitted to the Contracting Officer for prior approval before any work commences.

9.1.1 Scope Items Summary

The Contractor shall design, procure and install all items as follows but not limited to:

- Ramp and taxiway edge lighting

- High mast ramp flood lighting

- Grounding system including static grounding points/ aircraft tie-downs

- Secondary power distribution to support facilities

- Obstruction lighting (if required)

- Mechanical equipment power support

- Testing and commissioning

- Onsite training

9.2 GENERAL REQUIREMENTS

9.2.1 Applicable Standards and/or Codes

The publications listed below form a part of this Contract to the extent referenced or applicable. The Contractor shall be bound by the latest issued code or standard in effect at the time this Contract is issued for Construction. The publications are referred to by basic designation only.

The Contractor shall confirm and verify the standards and/or codes used, to include but not limited to:

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- National Fire Protection Association, NFPA 70 (National Electric Code (NEC)

- NFPA 77 Recommended Practice on Static Electricity

- National Fire Protection Association Life Safety Code, NFPA 101.

- National Fire Protection Association Standard for Installation of Lightning Protection systems, NFPA 780

FEDERAL AVIATION ADMINISTRATION (FAA) STANDARDS

- FAA Section AC 150/5345-43 Obstruction Lighting Equipment

OTHER

- Institute Of Electrical And Electronics Engineers (IEEE) IEEE C2 (National Electrical Safety Code (NESC)

9.2.2 Unified Facilities Criteria and Design Guides

Complete design of the airfield lighting system shall be in accordance with the most recent requirements of the United Facilities Criteria located here http://www.wbdg.org/ccb/browse_cat.php?o=29&c=4 and other design guides as listed below (Contractor to use the latest published version available at the time of Contract award.) In every instance where the criteria is applicable, it shall become part of this Contract document. The following guides to be used include but are not limited to:

UFC 3-260-01 Airfield and Heliport Planning and Design

UFC 3-520-01 Design: Interior Electrical Systems

UFC 3-530-01 Design: Interior and Exterior Lighting and Controls

UFC 3-535-01, Visual Air Navigation Facilities

UFC 3-535-02, Design Drawings For Visual Air Navigation Facilities

UFC 3-550-03N Power Distribution Systems

UFC 3-550-03FA Electrical Power Supply and Distribution

UFC 3-560-01 Electrical Safety, O&M

ARMY TM 5-811-3 (AIR FORCEAFM 88-9 CHAP. 3) Electrical Design Lightning and Static Electricity Protection

U.S. Army Corps of Engineers, Transatlantic Programs Center, Design Instructions Manual.

Illuminating Engineering Society of North America (IESNA).

Design measurements shall be shown in metric units.

9.2.3 Guide Specifications

The Contractor shall utilize the Division 26-Electrical and 33-Utilities guide specifications and others, found on this website: http://www.wbdg.org/ccb/browse_org.php?o=70, in preparing their technical specifications.

Guide specifications may be found on the internet at Construction Criteria Base (CCB), available to the public at the following url: www.ccb.org. The Contractor shall edit applicable guide specifications and submit a completed version for approval as part of the submittal requirements of this Contract including:

UFGS 34 73 13 Mooring and Grounding Points for Aircraft

UFGS 26 56 20.00 10 Airfield and Heliport Lighting and Visual Navigation Aids.

UFGS 26 56 36.00 40 Floodlighting- to be used for the HID Metal Halide ramp floodlighting. The section on Series Circuit Transformers can be deleted.

UFGS 33 71 02.00 20 Underground Electrical Distribution

If a needed specification is not available on this site the Contractor can submit a proposed spec required in order to result in a complete set of specifications for this work.

Design measurements shall be shown in metric units

9.2.4 Construction Coordination

If not specified elsewhere in the Contract, the Contractor shall coordinate his construction schedule with and obtain approval of the Contracting Officer a minimum of 30days prior to any site construction activity or mobilization. The schedule shall minimize interference with base operations. The Contractor shall ensure that temporary and existing systems remain in operation as long as possible to allow a minimal disruption of airfield operational capabilities.

9.2.5 Electrical Site Survey

The contractor shall perform a site survey prior to design start and is responsible for obtaining all necessary information and performing all calculations, measurements, and any other data pertinent to design and construction of this project.

The Contractor shall note all existing utilities, structures and enclosures that could possibly impact the electrical design and power supply for this project and provide a report to the Contracting officer. The report shall include findings and recommendations in how to utilize these facilities if possible or to integrate or utilize existing facilities into the final design.

9.2.6 Site power

Site power shall be supplied from the Rotary Wing Ramp and Taxiway high mast lighting manual transfer switch/generator/medium voltage transformer installed on Phase I.

Secondary three phase voltages shall be 480V or 208V 60 HZ.

Single phase shall be 277, 240 or120V 60HZ. Service and distribution shall generally be 3-phase, 4-wire 208/120V utilization power for convenience receptacles and small power loads.

9.2.7 Environmental Conditions

The design and selection of materials for exterior work shall be appropriate for the site environmental conditions as described in the Contract. The Contractor shall clearly indicate any de-rating factors applied to equipment or cabling.

Required design capacities including adequate spare capacity must be met after applying applicable de-rating factors to equipment and cabling. Where multiple feeder cables are run within close proximity, apply de-rating factors according to manufacturer's guidance and the NEC.

9.2.8 Material

- Material and equipment installed under this contract shall be for the appropriate application and shall have a minimum life expectancy of 25years in this project environment and use expected, unless specifically excepted elsewhere in this Contract.

- All airfield lighting system equipment shall be certified by the Federal Aviation Administration (FAA). All airfield lighting materials and equipment shall be manufactured to relevant FAA AC 150/ XXXX standards . The Contractor shall provide proof to the Contracting officer in the form of FAA Certificates, verifying that the suppliers of the airfield lighting equipment and materials is FAA Certified prior to any equipment installation. Material installed without this certification will be in violation of the Contract requirements and subject to penalties or withholding of payment for services until the problem is resolved to the Contracting officers satisfaction.

- Material and equipment shall be a standard product of an established manufacturer regularly engaged in the manufacturing business for at least 5 years and the product by that manufacturer shall essentially duplicate items that have been successfully utilized by industry and businesses for at least 2 years prior to bid opening.

- Equipment installed shall be capable of being serviced by an organization that is, in the opinion of the Contracting Officer, reasonably convenient to the site if practical and feasible.

- Materials and equipment shall be installed in accordance with recommendations of the manufacturer. Major components of equipment shall have the manufacturer's name, address, type or style, voltage and current rating, and catalog number on a non-corrosive and non-heat sensitive plate, securely attached to the equipment.

- All equipment delivered and placed in storage, prior to installation, shall be protected from the weather, humidity and temperature variation, dirt and dust, and any other contaminants.

- Equipment and materials shall be new unless indicated or specified otherwise.

- Enclosures for exterior and interior applications shall be NEMA Type 4 (IEC Classification IP54) and NEMA Type 1 (IEC Classification IP10), respectively unless noted otherwise.

9.2.9 Manholes/Handholes/Pullboxes

Contractor shall be responsible for providing handholes, manholes and/or pull boxes as required by the applicable referenced codes and publications.

All covers for all manholes/pullboxes and handholes shall be constructed:

- to meet ASTM (American Society for Testing and Materials) Specification A 48, Class 20. (9,090kg vertical load) and loading as per Section 2 -Utilities Trenches and Conduits

- in locations subject to aircraft traffic, to support not less than 34,000kg (75,000 lbs) single wheel load. The top surface of foundation should be 1 inch above grade per UFC 3-260-01 for runways (paragraph 3.9). See Air Force ETL 02-1 for heavy aircraft loading to determine the lateral loads on handholes/manholes. Structural calculations must be submitted for government approval prior to construction.

9.2.10 Grounding System:

This includes design, construction, all necessary labor, equipment, and material for a fully functional electrical system required for reliable operation of this project. The Contractor shall extend the grounding from the adjacent Phase I flood lighting system to integrate with the ramp floodlighting system for this project.

A complete grounding system shall be provided to comply with the requirements of the National Electric Code (NEC), 2008 Edition and UFC 3-535-01.

- All exposed non-current carrying metallic parts of electrical equipment in the electrical system shall be grounded/bonded.

- Insulated grounding conductor (separate from the electrical system neutral conductor) shall be installed in all feeder and branch circuit raceways per the NEC.

- Equipment safety grounding/bonding conductor shall be insulated green-colored per the NEC.

- Ground rods shall be copper-clad steel, 20mm (0.75 inch) round and 3 meter (10 feet) long, minimum.

- Below final grade, ground wires shall be no less than 2/0 CU stranded in size

- Ground resistance at any grounding point shall not exceed 25 ohms when measured less than 48 hours after rainfall. Additional ground rods will be installed as needed to ensure this value is not exceeded. Test results shall be submitted to the Contracting Officer by the Contractor documenting these results for all locations.

- Static grounding systems will be in accordance with UFC 3-520-01, NFPA 77 and MIL-HDBK-419A.

- Floodlighting poles must have two separate safety grounds. In addition to the circuit ground wire, safety grounding shall be provided for each flood lighting pole with as a minimum each pole solidly grounded with a ground lug at the base from the fixture to ground rod(s). An underground ground wire, minimum 35mm sq (#2AWG), can run from a separate system ground grid in lieu of a ground rod. If a ground rod(s) is used, the ground wire from the ground rod to the pole ground lug, will be a minimum of 35mm (#2) stranded copper. All ground wires shall be clamped together at the internal pole ground lug.

- Underground connections shall be exothermal welded utilizing molds and materials designed for that purpose by reputable established manufacturers.

- All above grade ground connections will use brass or stainless steel connectors designed specifically for grounding use and to minimize dissimilar metal corrosion issues.

9.2.10.1. Lightning Protection

Lightning protection design will follow NFPA 780.

A TVSS (Transient Voltage Surge Suppressor) unit shall be provided at all service entrances installed per the manufacturers recommendations. These TVSS units will meet or exceed the latest UL 1449 standard. As a minimum, metal oxide varistors (MOV) technology shall be used. A service entrance shall include all first power or lighting panels downstream from a generator or transformer.

9.2.10.2. Static Grounding Points/ Aircraft Tie-downs

Static grounding if required, shall be provided on ramps for aircraft parking in accordance with United Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning and Design manual, attachment 11, Tiedowns, Mooring, and Grounding Points. Include specification section 34 73 13 Air Force Tiedowns, Army Mooring and Grounding Points for Aircraft.

9.2.10.3. Counterpoise Lightning Protection System

Provide a continuous counterpoise of number 25 sq mm minimum (#4 AWG) bare, stranded copper wire over the entire length of all primary circuits supplying airfield lighting per UFC 3-535-01.

9.2.11 Transformers- Dry Type (less than 600V)

Dry type transformers shall be general purpose, dry-type, self-cooled and ventilated, with exceptions if justified.

Indoors provide transformers in NEMA 1 enclosure, outdoors NEMA 3R.

Transformer shall have 220 degrees C insulation system for transformers 15 kVA and greater, and shall have 180 degrees C insulation for transformers rated 10 kVA and less, with temperature rise not exceeding 80 degrees C under full-rated load in maximum ambient of 45 degrees C.

Transformer of 80 degrees C temperature rise shall be capable of carrying continuously 130 percent of nameplate kVA without exceeding insulation rating.

Transformers shall be quiet type with maximum sound level at least 3 decibels less than NEMA standard level for transformer ratings indicated.

All dry type transformers shall meet ANSI/IEEE or equivalent standards as follows:

ANSI C89.2/NEMA ST 20
ANSI C57.12.91
ANSI C57.96
UL 506
UL 1561

Acceptable suppliers of dry type transformers are Siemens, GE, Olsun Electrics Corp (http://www.olsun.com/gt.html), SQ D (Merlin Gerin) or acceptable equal.

9.2.12 Identification Nameplates

Major items of electrical equipment, such as the transformers, manholes (MH), pullboxes, hand holes, panel boards, street light poles, and load centers, etc, shall be provided with permanently installed engraved outdoor rated identification nameplates as per the specifications. These nameplates shall identify the equipment by type or function, ratings, configuration and specific unit number and be capable of resisting sunlight for 25 years if outdoors.

Contractor shall submit a schedule of name plates for all electrical equipment for approval of the Contracting Officer prior to ordering.

9.2.13 Warning Signs

In addition to standard warning signs required by the specifications, The Contractor shall perform an Arc Flash Hazard Analysis Study per the requirements of NFPA 70E or include existing published information for typical equipment similar to that to be used on this project, to determine Flash Hazard Boundaries and the Personal Protective Equipment (PPE) level needed.

Specific arc flash hazard sign requirements will be made based on the arc flash analysis of electrical equipment to be submitted by the Contractor. See Section 01 33 00.12 10 for more Electrical submittal requirements.

Provide durable permanent indoor or outdoor warning signs on switchboards, panelboards, industrial control panels or other energized electrical equipment as required per NEC Article 110.16. The warning signs shall

include the Flash Hazard Boundary and the Personal Protective Equipment (PPE) required for working on equipment hot. (Reference NFPA 70 Article 110-16; NFPA 70E Article 130.3; and UFC 3-560-01 Electrical Safety, O & M).

9.2.14 Mechanical Equipment

Contractor shall design, provide and install circuits for all mechanical equipment that require power and make the final connections.

9.2.15 Seismic Requirements

All electrical equipment shall be installed to meet the seismic requirements as defined by the International Building Code, IBC 2003 and seismic response coefficients as identified in the Structural section.

9.2.16 Testing and Commissioning:

In addition to requirements in other sections of this Contract the Contractor shall adhere to the following as a minimum:

The Contractor shall provide all necessary temporary power and equipment to operate the systems for testing and shall provide all test equipment.

All test equipment performing any type of measurements or documenting field test values must have a recent valid certificate of calibration acceptable to the Contracting Officer.

After installation of all equipment, Contractor shall adjust that equipment as necessary and conduct checkout tests in accordance with the procedures contained in the equipment manufacturer’s instruction books or as per NETA (National Electrical Testing Association) whichever is more stringent. All systems shall be functionally checked and tested in the presence of the Contracting Officer for satisfactory operation prior to the commissioning the overall installed system.

After functionally checking individual systems or equipment the Contractor shall demonstrate, by operational tests, that the entire system will operate satisfactorily on remote and local control under all foreseeable operational scenarios. These scenarios will be determined by the Contractor and submitted to the Contracting Officer for approval and modification, if needed, prior to any system testing.

All tests will be thouroghly documented and witnessed by the Contracting officer or his designees. Contractor shall cooperate with, assist and train the appropriate Air Base personnel during the shakedown testing to exercise, test and evaluate the system in an operational environment to verify the system is ready for full operation. The operational testing and evaluation shall conform to applicable provisions of FAA Order 6750.53 FAA Category I Instrument Landing System (CAT I ILS) Project Implementation Plan.

Only after all testing and commssioning is completed will the Contracting officer will acknowledge substantial completion and acceptance of the Contract.

9.2.17 Onsite Training

The Contractor shall include all costs associated with providing a qualified manufacturers field representative to train base personnel in the operation of the newly installed upgrade to the existing airfield lighting systems. The costs for handouts, pamphlets, course material, manuals, etc shall be included in the training by the Contractor. The training period shall consist of a minimum total of 6 hours for up to 6 designated base personnel.

The Contractor shall provide an hourly rate in the case the Contracting Officer wants to provide additional training for the operational staff. The course instructions shall cover operation and maintenance of all aspects of the airfield lighting system and the interface with the existing airfield systems.

The Contractor shall submit information describing training to be provided, training aids to be used, duration, and schedules for Contracting Officer approval.

9.2.18 Warranty and Recommended Spare Parts

Contractor shall supply the equipment manufacturers' recommended testing equipment and tools, and the manufacturer's standard package of spare parts and spare circuit boards. The test equipment and spare parts shall be located as directed by the Contacting Officer and shall be sufficient for at least two years of normal operation.

The systems equipment and operation shall be warranted against manufacturer and installation defects after acceptance of the systems in accordance with other requirements of this Contract.

9.3 ELECTRICAL SYSTEMS

9.3.1 High Mast Ramp Floodlighting

High mast flood lighting for parking apron shall be installed as an extension from the adjacent Phase I ramp floodlighting.

The system shall include all fixtures, hardware, poles, cables, connectors, adapters and appurtenances needed to provide a fully functional flood lighting system. Lighting design shall be in compliance with the requirements of relevant ICAO, FAA and IES standards for active use during night time operations.

The key design elements of the system are as follows but not limited to:

- The Contractor shall integrate the Phase I and Phase II ramp floodlighting to be one ramp floodlighting power and control system.

- Normal light fixtures shall be metal halide (white light) mounted on poles located outside of the aircraft clear zone. The design shall also ensure no poles violate the runway or airspace obstruction clearance height requirements

- Each bank of lights shall include emergency lights (such as Halogen type) lighting to a lower lighting level that will come on immediately when switched and be turned off automatically after the main bank of lights is up to full output. (minimum wattage of the emergency lights in a bank of lights

shall be between 20-30% of the total wattage of the normal lighting wattage in that bank.)

- Each bank of lights on a given pole shall be controlled by a hand-off-auto outdoor switch through a contactor. On auto the contactor shall be controlled by a photocell switch.

- The Contractor shall install the necessary control circuit or system to permit all Phase I and Phase II floodlights to be turned off remotely from the Main Airfield Control Tower control room with one command.

- Normal apron floodlighting shall meet a minimum intensity of not less than 0.5 footcandles (5.38 Lux), in the horizontal plane. The horizontal plane shall be considered 1 meter above the pavement. Horizontal illumination should have a uniformity ratio (average to minimum) of no more than 4:1 as much as practical. Upon completion, Contractor shall test the lighting system to verify it meets this criteria and make any required adjustments to the installation, if necessary.

- Maintenance on high mast lights shall be able to be performed at ground level as part of the system design.

- The height of poles and fixture configuration shall insure that, with proper adjustment of the floodlight, no glare or blinding light will affect the control tower or aircraft operating in the traffic pattern or on the runways and taxiways.

- Light fixtures shall be equipped with adjustable louvers to control up-light and unwanted glare.

- Provide dimensions from the edge of the full strength pavement to the flood light poles and the distance between poles on the apron flood lighting plan. Apron lighting shall be located so as not to extend into the runway height obstruction or aircraft rotor tip clearance requirements. (See UFC 3-535-01 paragraph 10-4.2.2, IES RP-14 figure 1 and UFC 3-260-01 for requirements.)

- A weatherproof switch operated duplex general-purpose 120V receptacle, mounted 1.5 meters above finished grade, shall be provided at each flood lighting pole. Location of the flood lighting controls (cabinet) for each pole shall be coordinated with the Contracting Officer. Flood lighting controls shall be provided inside a weather-proof pad lockable control cabinet, at each pole.

- Provide the exact manufacture and catalog number of the lighting fixture used for design, including the present manufacture's name, address and phone number and email address.

- - Provide a flood light pole foundation design, by a qualified structural engineer to include wind load calculations for the foundation used.

9.3.1.1. High Intensity Discharge Light Ballasts

Provide ballasts designed for metal halide lights manufactured for this purpose that will as a minimum:

- maintain correct lamp operation over a voltage-input range of plus or minus 10 percent of rated voltage.

- provide a power-factor lamp load of not less than 95 percent.

- conform to NEMA C82.4

- for a 1% voltage variation provide of .8% of wattage change or less.

- have voltage dip tolerance without extinguishing the light 25-60%

- starting current is lower than operating current

9.3.2 Secondary Power Distribution System

Contractor shall design, provide all material and install a complete electrical low voltage distribution system to provide low voltage power to all components of the airfield lighting system and the ramp area flood lighting.

- All electrical installation shall be in accordance with the applicable requirements of NFPA 70 (National Electric Code, 2008 Edition).

- Secondary circuits for high mast lighting do not require spare cables or conduits.

- The Contractor will procure, design and install all wiring and equipment to the terminals of the distribution panel(s).

- All low voltage circuits shall be designed and installed to ensure the worst case voltage drop on any circuit is less than 3% at any bus or light fixture from the main service panel or 5% maximum from the source and/or source transformer. High mast lighting voltage drop is an exception to this guideline as long as the lamp ballasts provide correct lamp operation for plus or minus 10% of rated voltage.

- All breaker coordination will be provided by the Contractor from the source to the panel breakers and other protective devices in the circuits.

9.3.2.1. Switchboards and Panelboards

The Contractor shall design, install and provide material for all lighting fixtures, cabling and equipment for the secondary distribution system to include but not necessarily limited to the following requirements:

- Three phase service entrance panelboards rated greater than 200A shall be provided with an ammeter/selector switch, voltmeter/selector switch and kilowatt hour meter. Selector switch shall be provided for reading individual phases.

- Main switchboards being the first switchboard downstream from the generator or transformer shall be UL listed for Service Entrance.

- All distribution shall be from circuit breaker switchboards or panelboards

All panels shall:

- be provided with a minimum of 20% spare breakers installed for each size/type used and all spare space shall be equipped and ready for future breaker installations.

- have a minimum of 25% spare KVA capacity for future load growth.

- be provided with a typed directory, in English and Farsi that clearly lists each specific load for each circuit. The directory shall be placed within a durable heavy duty clear holder on the inside of each power panel door readable without removing from the holder. It should be suitable for making changes by field personnel over time.

- have a complete single line diagram provided on the inside of the panel door along with the directory, showing all panels serviced from the panel power source.

All circuit breakers shall be:

- labeled with an identification number corresponding to the panel schedule and drawings.

- connected to bus bar(s) within the panel boards. Daisy chain (breaker-to-breaker) connection(s) shall not be acceptable. A 3-pole circuit breaker shall be a single unit and not made up of 3 single pole circuit breakers.

- “bolt-on” type and connected to all copper phase and neutral bus bar(s) within the panel boards. Daisy chain (breaker-to-breaker) connection(s) shall not be acceptable.

- rated at 20 amperes minimum for minimum branch circuit size.

9.3.2.2. Receptacles

- The final circuit breaker serving receptacle circuits shall be rated 20 ampere.

- All outdoor receptacles will be ground fault interrupter (GFCI) type.

9.3.2.3. Cables and Wires

- All exterior secondary AC voltage cables shall be rated for underground duct installation and shall be rated for either 600V for secondary voltages above 300V and 300V for AC voltages less than 300V.

- All conductors shall be copper.

- Underground installation can use direct buried armored cable for 4 conductor 3phase circuits or individual THHN cable in conduit.

- All wiring shall be copper, minimum 4 mm sq (# 12 AWG).

- Proper wire nuts/connectors shall be used for splicing wire. No twist-wire connections with electrical tape wrapped around it shall be acceptable.

- No secondary power cable splices are allowed except for lighting and receptacle circuits.

9.3.2.4. Secondary Raceways

This requirements shall include installation of secondary power distribution system (service entrances) in an underground cable system from the generator control panel(s) and secondary distribution centers, to the respective distribution panels.

- Only RGS (Rigid Galvanized Steel meeting ASTM (American Society for Testing and Materials) standards) will be used above grade to enclose all wiring per the NEC. They shall be surface mounted in unfinished areas.

- Exterior raceways (ductbanks, conduits) shall be installed at a slope towards a pullbox or hand-hole to avoid collection of water in the raceway.

- Maximum conduit fill will calculated be per the NEC requirements.

- All conduit stub outs below grade will be installed with a metal detectable marker at the stub out point and an above grade durable marker.

- For all conduit and ductbank, cable warning tape with magnetic strips suitable for detection by equipment designed for that purpose, shall be provided 450mm below final grade (18inches) directly above all underground cables and conduits. For cable raceway more than 30cm wide, more than one warning tape shall be required.

- Ductbanks designed for secondary voltage feeders shall consist of PVC Schedule 40 conduits, 53mm (2 inch) minimum internal diameter.

- Conduits shall be encased in concrete, when under paved areas or road crossings. Cables crossing roads within concrete encased pipe sleeves is also acceptable.

- All runway cable crossings shall be in concrete encased ductbanks.

- Each encased ductbank shall be provided with a minimum of one (1) spare conduit of same size for future use. If different size conduits are used in one ductbank run then each size will have at least one spare.

- Direct buried conduits may be used for apron / taxiway edge lighting system and shall not be less than 53mm (2 inches) internal diameter.

- All outdoor below grade cables or conduits shall be installed per NEC requirements but no less than 600mm below final grade.

- All conduits shall be cleaned with a wire mandrel prior to the installation of cables.

- Spare conduits shall be capped at both ends with a pull string in place.

- Secondary duct-bank system shall include pullboxes/hand-holes for secondary power as required.

- Conduits shall be securely and rigidly fastened in place as required by the NEC. No hardware, panels boxes or other electrical equipment will be supported by conduit.

- All non-metallic conduits shall be no smaller than 21mm internal diameter (3/4 inches).

9.4 NAVAIDS AND AIRFIELD LIGHTING SYSTEMS

9.4.1 Engineer and Installer Qualifications

The design of the airfield lighting systems shall be completed by qualified engineer(s) with a minimum of 5 years experience in designing airfield lighting systems. The Contractor shall provide a detailed resume and documented evidence of past performance for the engineer(s) designing these systems to the Contracting Officer for approval. The engineer(s) information shall indicate a thorough knowledge and experience with ICAO, FAA, military and other appropriate standards.

The engineer(s) shall work closely with the airfield lighting equipment manufacturer engineers to ensure that the systems are properly coordinated.

The Contractor shall employ qualified installers thoroughly familiar with airfield lighting equipment and systems installation. The Contractor shall submit written verification that the installers are experienced with the installation, testing, and maintenance of these systems. Information for these individuals demonstrating their qualifications and experience shall be submitted to the Contracting Officer (CO) for approval.

If it is found the installers are not qualified at any time during the installation process, the Contracting Officer shall have the authority to reject the credentials of those personnel who will have to be replaced by personnel acceptable to the Contracting officer at the Contractors full expense and associated cost to the project, as a result of this replacement.

9.4.2 Airfield Lighting Systems Manufacturer Certification

All manufacturers of aviation and airfield lighting materials and equipment for this Contract shall be third party tested and listed in theFAA Advisory Circular (AC) 150/5345-53C, Airport Lighting Equipment Certification Program. Manufacturers shall be listed specifically for the material or equipment they are supplying. Manufacturers not listed as certified will not be acceptable.

Airfield Lighting System equipment (fixtures etc.) shall be sole source procured equipment to match existing installed equipment if practical and feasible while meeting the required standards of this scope.

9.4.3 Air Navigation Lighting

Contractor shall provide design and construct a complete and functional air navigation lighting system for the ramp and taxiway pavements interconnecting ducts, manholes, hand-holes, conduit, wiring, grounding counterpoise, and lighting fixtures.

The visual air navigation system shall be composed of the following components per Table 2.2 in UFC 3-535-01 for VMC Night No-Instrument with some adjustment as follows:

1. Taxiway edge lights

2. Apron edge lighting

3. Guidance signs

4. Obstruction lighting (if justified)

5. Additional Constant Current Regulators (CCR) and electrical distribution equipment and controls installed in the Airfield Lighting Enclosure (ALE2) built as part of the Rotary Wing and Taxiway Phase I, as required for the Phase II expansion.

6.The existing mimic panel, human machine interface (HMI) display or PC based display in the ATCT and existing ALE1 as part of the main runway lighting system, shall be modified and/or reprogrammed by the Contractor to the satisfaction of the Contracting Officer, as part of this contract, to reflect the Rotary Wing Ramp and Taxiway Ph II lights.

- Ramp edge lighting shall follow the same guidelines as that specified in the UFC for taxiway edge lighting

- Location of lights and appurtenant items shall conform to the referenced UFC.

- Heliport lighting shall follow UFC 3-535-01 and in particular, Chapter 8 for Heliport Lighting.

- Elevated taxiway edge lighting (non-interleaved) shall be provided for all new taxiways and ramps.

- Ramp edge lighting system shall be an extension of the taxiway or edge lighting circuit.

- Ramp Edge lights shall not be required behind shelters and other areas inaccessible to airworthy vehicles.

- Edge light fixtures and equipment shall be as specified herein but shall be the of the same type, kind and by the same manufacturer as those of other new or proposed site facilities or as designated by the Contracting officer.

- All necessary 'mandatory instructions' and 'information' signs, with fixed message, shall be provided for the new taxiway(s) and ramp. Signs shall be internally illuminated.

- Plastic cans and bolts shall not be used.

- All light fixtures recessed and elevated shall be height adjustable to allow for additional pavement or grading in the future.

9.4.3.1. Airfield Lighting Enclosure (ALE2)

An ALE was built to be built on Ph I referenced herein as ALE2. The ALE2 electrical equipment room will house any and all additional ramp/taxiway electrical equipment needed for Ph II. The Contractor shall supply all electrical electrical equipment needed for a complete and working airfield lighting control system for the Rotary Wing Ramp and Taxiway Ph II including all new power/control supply equipment needed for a complete CCR installation.

ALE2 should already be controlled from the main Air Traffic Control Tower (ATCT) with alternate local control within the main existing Airfield Lighting Enclosure (reference as ALE1). The local control in ALE2 should already be connected to the existing main ATCT through ALE1 to allow full control of all systems in ALE2 from ALE1 and/or the ATCT.

The existing mimic panel, HMI display or CPU based display in the Air Traffic Control Tower (ATCT) shall be modified as part of this contract to reflect the rotary wing ramp and taxiway edge lights added for Ph II.

9.4.3.2. Constant Current Regulator (CCR)

All taxiway and ramp Ph II edge lighting shall be connected to constant current regulator(s) (CCRs) installed in ALE2. Contractor shall provide properly sized CCR(s) for the proposed taxiway and ramp edge lighting system expansion if the existing Ramp and Taxiway Ph I edge lighting equipment, cabling and infrastructure cannot carry the new load within their design ratings and limits. One spare CCR shall be provided as part of the contract if the Contractor uses an existing spare.

Reference Chapter 15 in UFC 3-535-01 for CCR design criteria.

CCR(s) shall as a minimum:

- be provided as required inside ALE2. Taxiways, Ramps and runways will have independent CCR circuits as required by the relevant UFC guides.

- be dry type, ferro-resonant .

- be sized for the ramp lighting, the taxiway lighting as shown on the layout drawings and maintain a minimum of 20% spare capacity based on the Contractor's maximum design loads and CCR ratings.

- have a minimum rating of no less than 10KW each

- have a 48V DC control voltage for local control of the lights

- be FAA type L-829, Class 1, Style 2 with monitoring.

- be solid state type and be microprocessor assisted and have an output transformer for automatic current regulation under varying load and input variations.

- be capable of operating all functions locally.

- have true RMS output current digital ammeter.

- be capable of compensating for an input voltage variation of plus or minus 15%.

- be sized to have a minimum of 20% spare capacity based on the Contractor calculated design loads.

- be programmable with complete monitoring of regulator functions.

- have proper working and maintenance space provide around the CCR.

All airfield light fixtures shall be installed on appropriate FAA Type (aircraft loading or non-aircraft loading) light bases.

All airfield lighting circuits shall be provided with identification tags in each light base, hand-hole or manhole, showing CCR#, circuit# and ampacity rating for the respective circuit.

9.4.4 Obstruction Lights

LED based obstruction lights shall be provided on top of all high mast lighting poles or any other structures if required by UFC 3-535-01 Chapter 6, Standards For Obstruction Lighting for high mast lights. Lights shall be dual, minimum 100 watt lamp each; steady burning, color red and FAA approved per AC 150/5345-43. Provide the power source, panels and facilities to deliver a complete and working system.

The design submittals must show in the design analysis clearly if obstruction lighting is or is not required based on the Contract installed facility elevations and locations from affected runways and other landing or takeoff zones.

10. ATTACHMENTS

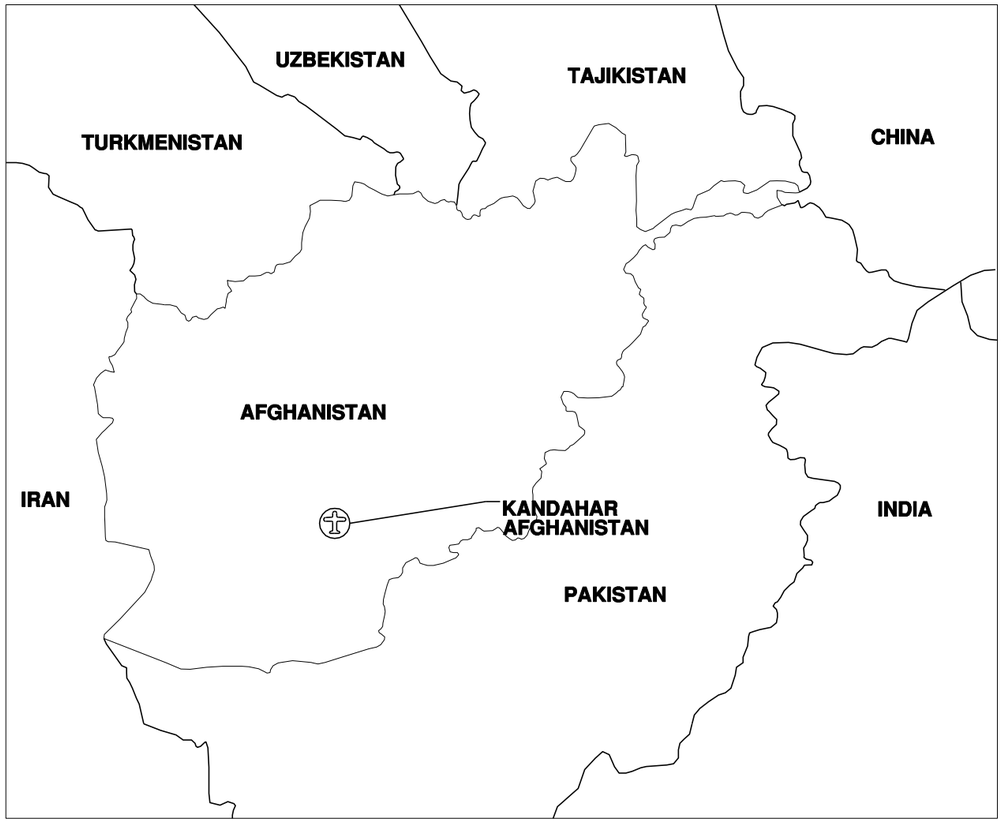
The following attachments form an integral part of this specification:

C-1 Project Location and Vicinity Plan
C-2 Overall Site Plan
C-3 Apron Site Plan
C-4 F.A.R.P.
C-5 Pavement Sections
C-6 Pavement Details
C-7 Pavement Marking Details
C-8 Pavement Details

Appendix A - Topographic Survey Scope of Work
Appendix B - 24-Hour Precipitation Extreme Value Analysis
Appendix C - Barrier Wall Details

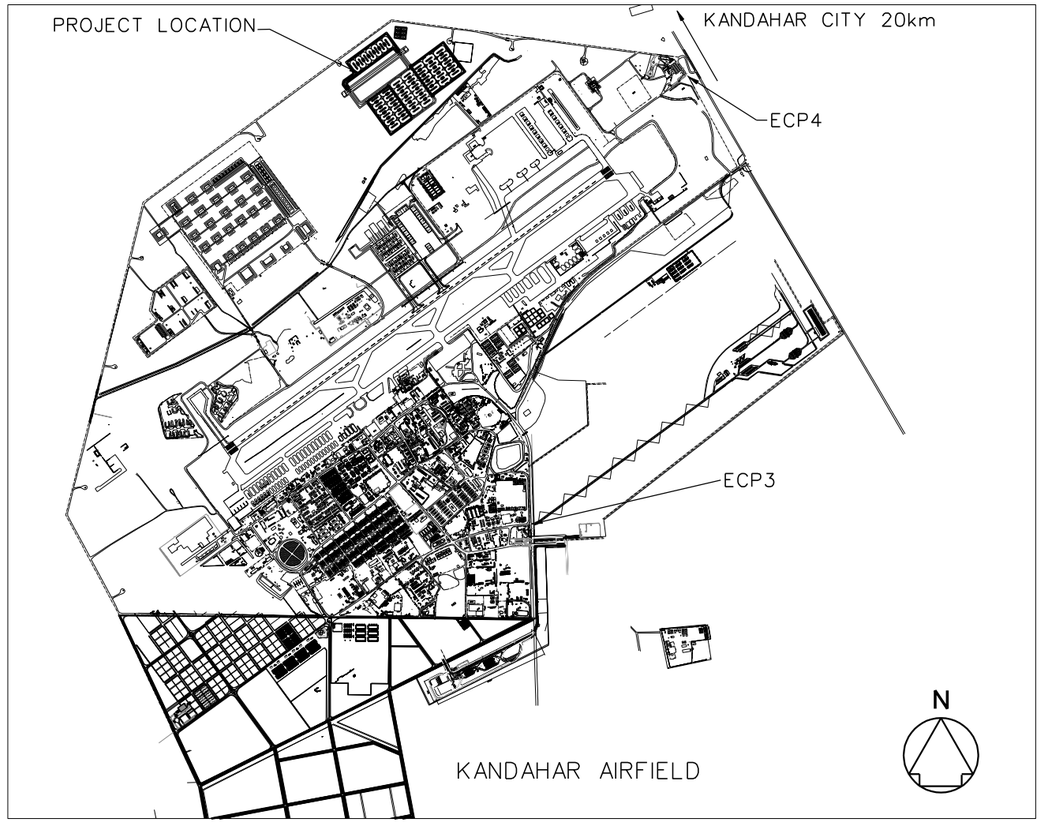
-- End of Section --

(End of Summary of Changes)



PROJECT LOCATION MAP

NOT TO SCALE



VICINITY PLAN

SCALE 1:20000

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
RIGID PAVEMENT	XXXX XXXX	XXXX XXXX
ASPHALT PAVEMENT	//// ////	//// ////
CHAIN LINK FENCE		
TREE		
LIGHT POLE		
SPOT ELEVATION	X 47 OR X(47)	
CONTOUR	47	
TIE DOWN		
STATIC GROUND		
HYDRANT FUEL PIT		

DESCRIPTION	EXISTING
ELECTRICAL LINE	E
COMMUNICATION LINE	C
STORM DRAIN LINE	SD
COMMUNICATION MANHOLE	
BOREHOLE	
PULL BOX	
STORM DRAIN BOX	CB

ABBREVIATIONS

AC, ACC	ASPHALT CEMENT CONCRETE
BC	BEGINNING OF CURVE
℄	DENOTES CENTER LINE
CM	CENTIMETER
CONC.	CONCRETE
CTR	CENTER
DIAM	DIAMETER
EC	END OF CURVE
EL	ELEVATION
ECP	EDGE OF CONCRETE PAVEMENT
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
EX, EXIST	EXISTING
E.W.	EACH WAY
FL	FLOW LINE
FS	FINISH SURFACE
GB	GRADE BREAK
INV. EL.	INVERT ELEVATION
LT	LEFT
M	DENOTES METER
MAX	MAXIMUM
MIN	MINIMUM
MM	MILLIMETER
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
PI	POINT OF INTERSECTION
PVMT	PAVEMENT
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PT	POINT OF TANGENCY
R	RADIUS
R	REINFORCED
RT	RIGHT
RWY	RUNWAY
SM	SQUARE METERS
TE	THICKENED EDGE
TEJ	THICKENED EDGE EXPANSION JOINT
TWY	TAXIWAY
(TYP)	DENOTES TYPICAL
W/	WITH

DESIGNED BY: DSA	DATE: 05-15-09		
DWN BY: DSA	SUBMITTED BY: R. KORTYOHANN CHIEF, PDT SITE DEV		
CHK BY: REK	FILE NO.: AF0908--CI01LS01		

SYMBOL	DESCRIPTION	DATE	APP

US Army Corps of Engineers
Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN
SITE DESIGN
PROJECT LOCATION AND VICINITY PLAN

SHEET REFERENCE NUMBER:
C-1

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5/14/2009

NOTES:

1. FUEL PUMPS AND BLADDER SYSTEMS NOT INCLUDED IN THIS CONTRACT

2. CONSTRUCTION ACTIVITIES AND LAYDOWN YARDS SHALL KEPT OUT OF THE DESIGNATED ACCIDENT PREVENTION ZONE.

3. SEE SHEETS C-3 AND C-4 FOR REQUIRED DEMOLITION LIMITS

4. SEE SHEET C-7 FOR STRIPING DETAILS.

5. SEE SHEET C-8 FOR REVETMENT AND MOORING POINT LAYOUT DETAILS.

GUARD TOWER LOCATION AND ACCESS DRIVE ADJUSTED BY OTHERS

1 C-2 C-5

326.65

105.00

SIX BERMS FOR 189 kL FUEL BLADDERS

APPROACH - DEPARTURE SURFACE EDGELINE
N 3,491,097
E 770,489

APPROACH - DEPARTURE SURFACE ACCIDENT PREVENTION ZONE

108.37

N 3,490,637
E 769,977

60.82

45.82

APPROACH - DEPARTURE SURFACE EDGELINE
N 3,490,977
E 770,363

APPROACH - DEPARTURE SURFACE EDGELINE
N 3,490,904
E 770,417

05

EXISTING PHASE I RUNWAY CONSTRUCTION

23

N 3,490,927
E 770,372

ACCIDENT PREVENTION ZONE
APPROACH - DEPARTURE SURFACE

APPROACH - DEPARTURE SURFACE EDGELINE
N 3,491,068
E 770,712

270.02

EXISTING PHASE I TAXIWAY

EXISTING FENCE & UTILITY CORRIDOR

2 C-2 C-5

269.35

EXISTING PHASE I APRON

2 C-2 C-5

238.02

EXISTING RAMP ACCESS ROAD

180.02

40 0 20 40 60 80
1:1500

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN METERS.

SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: DSA
DATE: 05-15-09
DWN BY: DSA
CHK BY: REK
SUBMITTED BY: R. KORTYOHANN CHIEF, PDT SITE DEV
FILE NO.: AF0908--CI02LS

US Army Corps of Engineers
Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN

SITE DESIGN
OVERALL SITE PLAN

SHEET REFERENCE NUMBER:
C-2

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5/14/2009

REMOVE 7.5M WIDE ASPHALT SHOULDER

EXISTING PHASE I TAXIWAY CONSTRUCTION

EXISTING PHASE I APRON CONSTRUCTION

EXISTING APRON ACCESS ROAD

REMOVE HESCO BARRIERS

270.02

269.35

238.11

180.02

40 TYP.

12.5 TYP.

7.50

R 20 (TYP.)

23 MIN

TE

TEJ

XXXX

2 C-3 C-5

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN METERS.

1:1000

10 0 10 20 30 40 50 60 70 80 90

DESIGNED BY: DSA	DATE: 05-15-09
DWN BY: DSA	SUBMITTED BY: R. KORTYOHANN CHIEF, PDT SITE DEV
CHK BY: REK	FILE NO.: AF0908--CI03LS

US Army Corps of Engineers Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II

KANDAHAR, AFGHANISTAN

SITE DESIGN
APRON SITE PLAN

SHEET REFERENCE NUMBER:

C-3

SYMBOL	DESCRIPTION	DATE	APP.

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5/14/2009

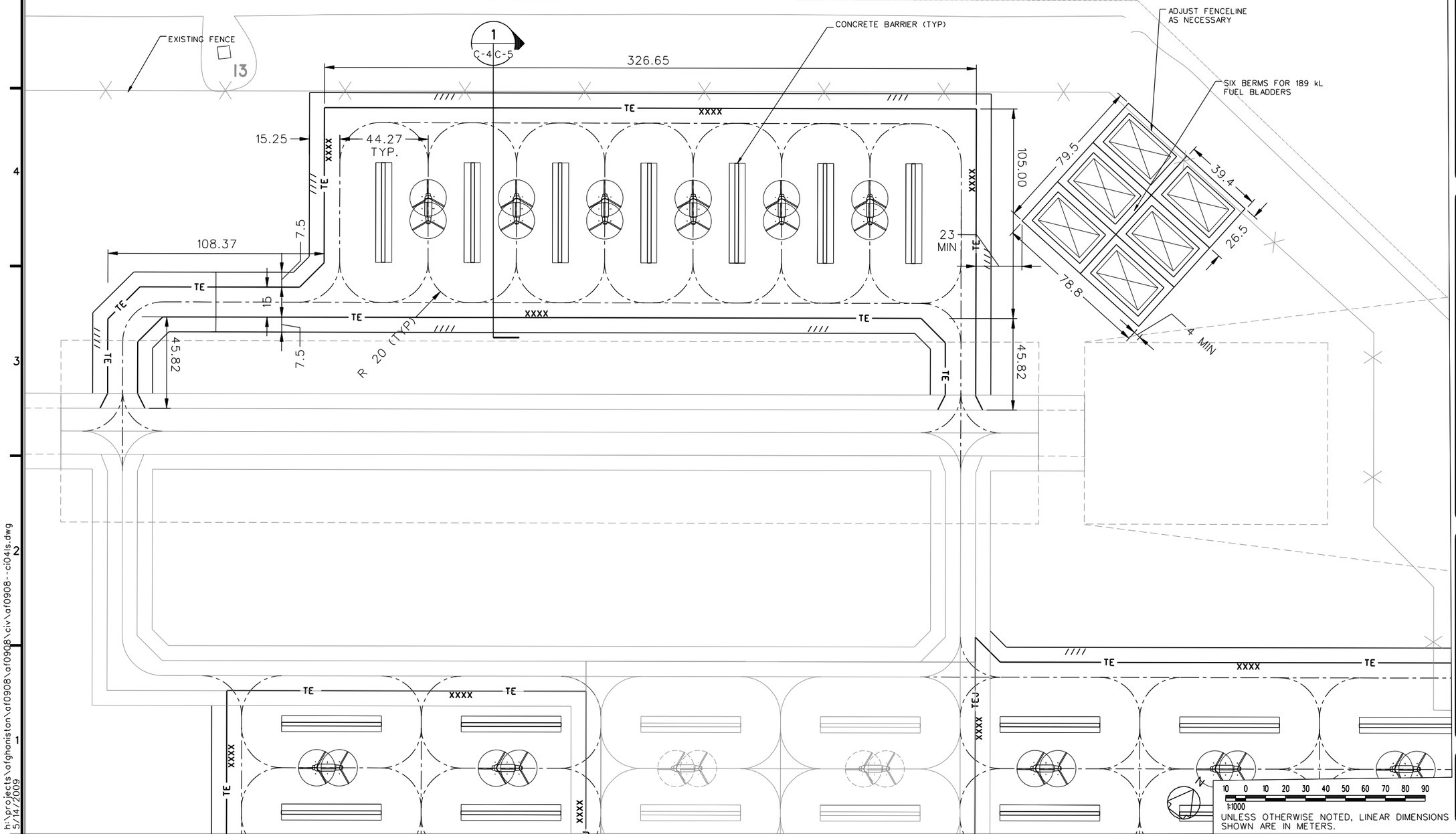
NOTES:

1. FUEL PUMPS AND BLADDER SYSTEMS NOT INCLUDED IN THIS CONTRACT

2. FUEL BLADDER BERMS TO BE OFFSET FROM APPROACH-DEPARTURE SURFACE EDGELINE BY A MINIMUM OF 4 METERS. SEE SHEET C-1 FOR LIMITS OF APPROACH-DEPARTURE SURFACE.

3. CONSTRUCTION ACTIVITIES AND LAYDOWN YARDS SHALL BE KEPT OUT OF THE DESIGNATED ACCIDENT PREVENTION ZONE.

4. SEE SHEET C-7 FOR STRIPING DETAILS.



SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY:	DATE:
DSA	05-15-09
DWN BY:	SUBMITTED BY:
DSA	R. KORTYOHANN CHIEF, PDT SITE DEV
CHK BY:	FILE NO.:
REK	AF0908--CI04LS

US Army Corps of Engineers
Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN

SITE DESIGN
F.A.R.P.

SHEET REFERENCE NUMBER:
C-4

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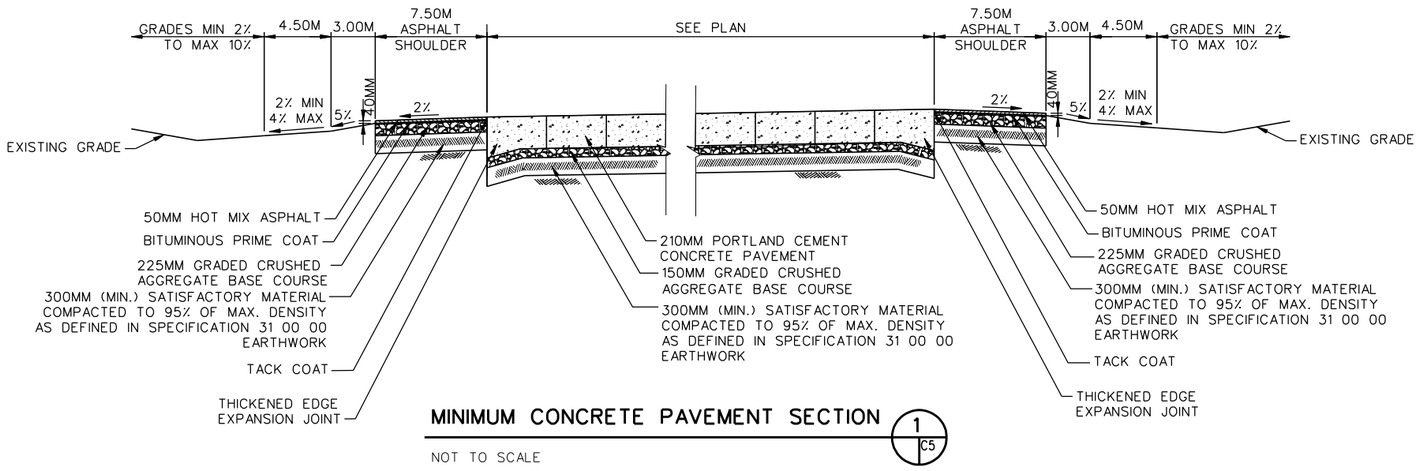
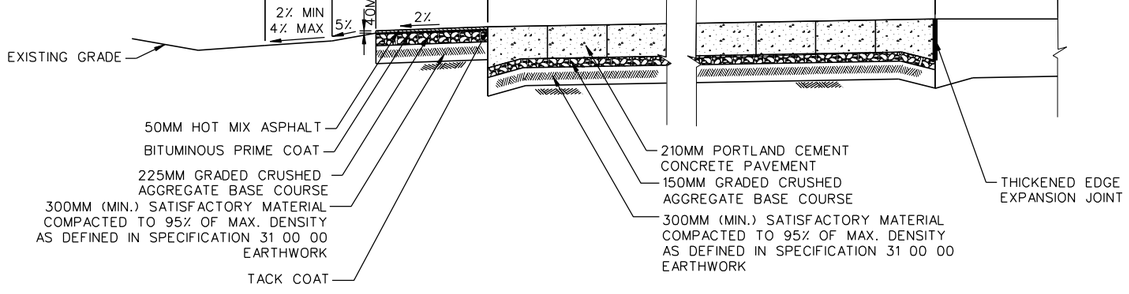
5/14/2009



MINIMUM CONCRETE PAVEMENT SECTION 1/C5

NOT TO SCALE



MINIMUM CONCRETE PAVEMENT SECTION 2/C5

NOT TO SCALE

NOTE: SEE SHEET C-6 FOR PAVEMENT DETAILS.

SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: RRP
DRN BY: TSR
CHK BY: REK
DATE: 05-15-09
SUBMITTED BY: R. KORTYOHANN, CHIEF, PDT SITE DEV
FILE NO.: AF0908--CP05SE

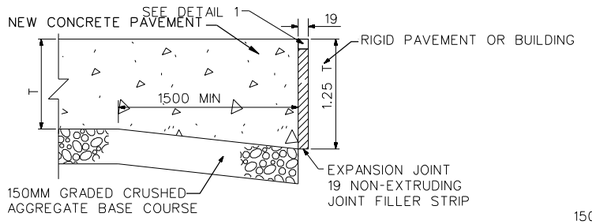
US Army Corps of Engineers
Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN
SITE DESIGN
PAVEMENT SECTIONS

SHEET REFERENCE NUMBER:
C-5

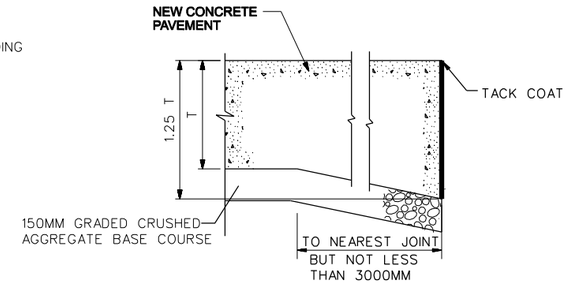
UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS.

h:\projects\afghanistan\af0908\af0908\civ\af0908--cp05se.dwg
5/14/2009



THICKENED EDGE EXPANSION JOINT DETAIL (TEJ)

NOT TO SCALE



THICKENED EDGE JOINT DETAIL (TE)

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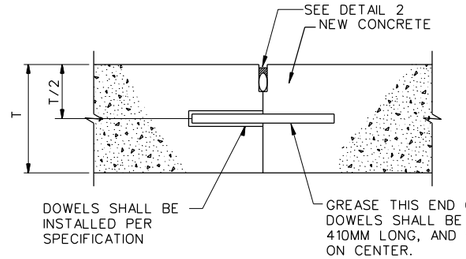
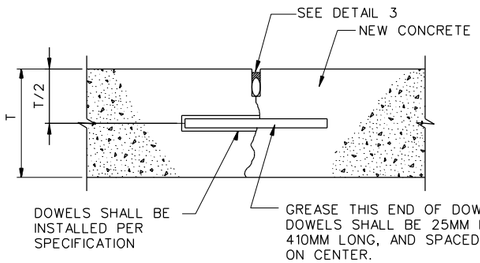


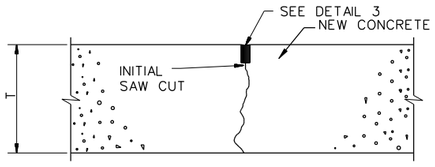
DOWELED CONSTRUCTION JOINT DETAIL

NOT TO SCALE



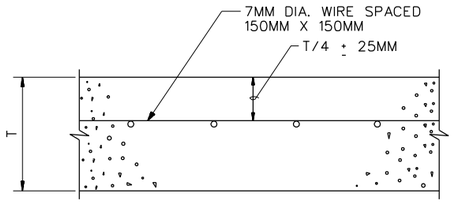
DOWELED CONTRACTION JOINT DETAIL

NOT TO SCALE



CONTRACTION JOINT DETAIL

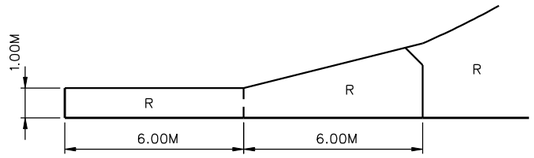
NOT TO SCALE



NOTE: REINFORCING IS REQUIRED ONLY FOR ODD SHAPED SLABS AND SMALL SLABS WHERE CRACKS OR BREAKS ARE MORE LIKELY. PLAIN JOINTED CONCRETE SHALL BE USED ELSEWHERE.

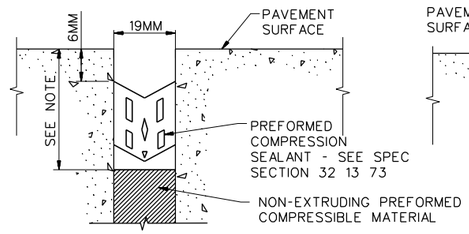
REINFORCED CONCRETE SLAB DETAIL

NOT TO SCALE



CONCRETE FILLET DETAIL 4 C6

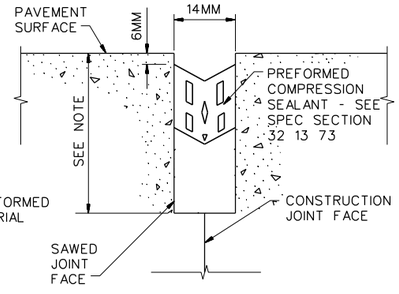
NOT TO SCALE



NOTE: DEPTH AS RECOMMENDED BY MANUFACTURER PER TYPE OF SEAL BEING USED (DEPTH NOT LESS THAN 38MM)

DETAIL 1 C6

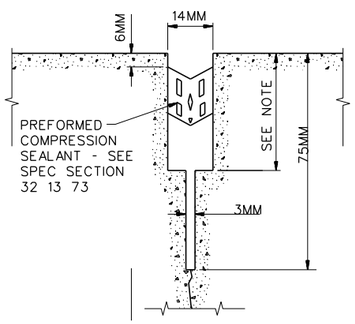
NOT TO SCALE



NOTE: DEPTH AS RECOMMENDED BY MANUFACTURER PER TYPE OF SEAL BEING USED (DEPTH NOT LESS THAN 38MM)

DETAIL 2 C6

NOT TO SCALE



NOTE: DEPTH AS RECOMMENDED BY MANUFACTURER PER TYPE OF SEAL BEING USED (DEPTH NOT LESS THAN 38MM)

DETAIL 3 C6

NOT TO SCALE

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS.

SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: RRP
DATE: 05-15-09
DWN BY: TSR
SUBMITTED BY: R. KORTYOHANN CHIEF, PDT SITE DEV
CHK BY: REK
FILE NO.: AF0908--CP06DT

US Army Corps of Engineers Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN
SITE DESIGN
PAVEMENT DETAILS

SHEET REFERENCE NUMBER:
C-6

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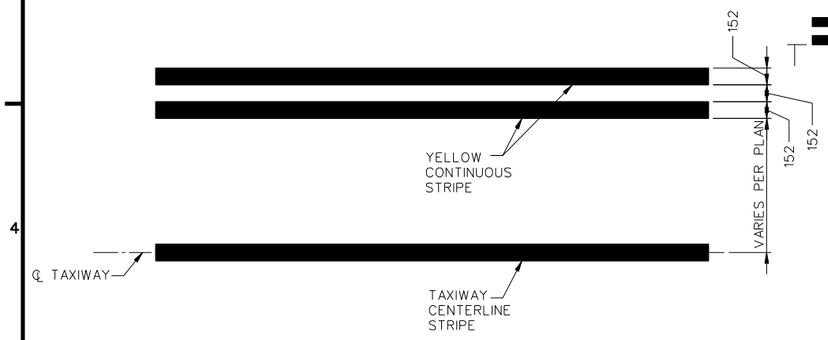
5/14/2009

ALL MARKINGS ARE YELLOW, RETROREFLECTIVE

TAXIWAY CENTERLINE STRIPE

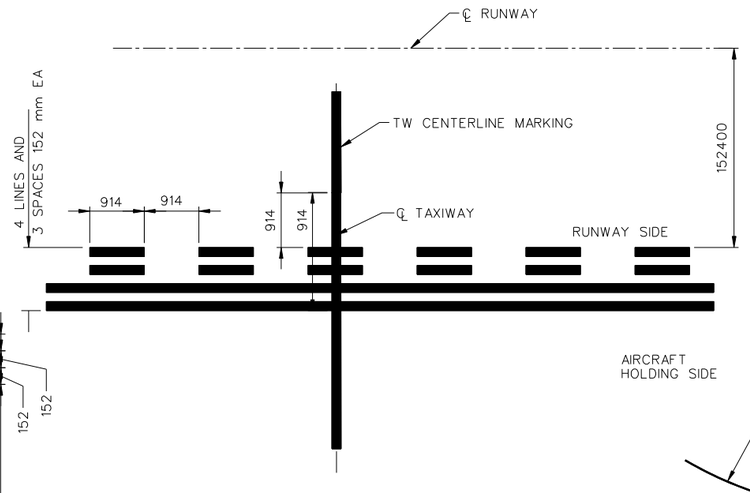
NOT TO SCALE



ALL MARKINGS ARE YELLOW, RETROREFLECTIVE

TAXIWAY, TAXILANE & APRON EDGE STRIPE

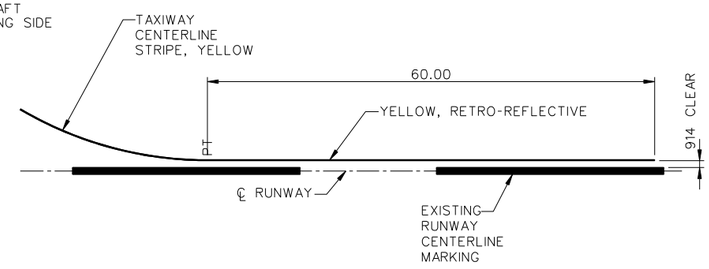
NOT TO SCALE



ALL MARKINGS ARE YELLOW, RETROREFLECTIVE

RUNWAY HOLDING POSITION MARKING

NOT TO SCALE



TAXIWAY CENTERLINE NOSE WHEEL GUIDELINE

NOT TO SCALE

AIRFORCE STATIC GROUND

NOT TO SCALE

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS.

SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: DSA
DATE: 05-15-09
DWN BY: TSR
SUBMITTED BY: R. KORTYOHANN CHIEF, PDT SITE DEV
CHK BY: REK
FILE NO.: AF0908--CP07DT

US Army Corps of Engineers Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN
SITE DESIGN
PAVEMENT MARKING DETAILS

SHEET REFERENCE NUMBER:
C-7

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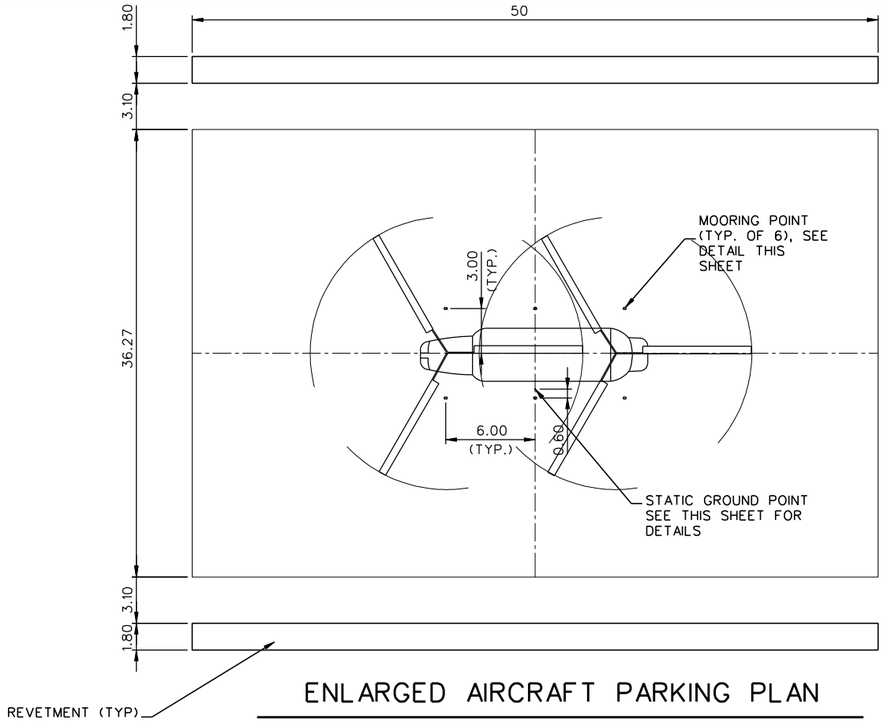
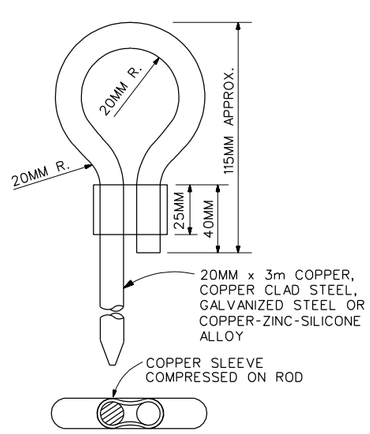
5/14/2009

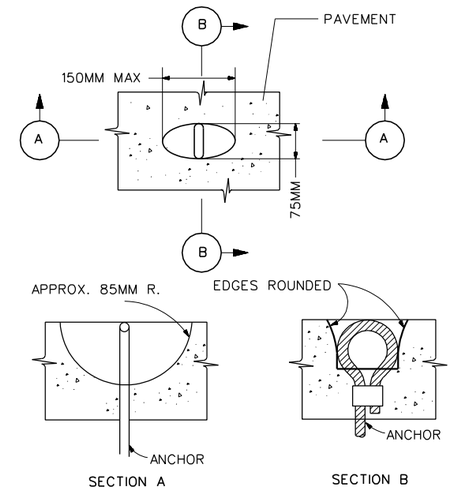


ENLARGED AIRCRAFT PARKING PLAN

NOT TO SCALE

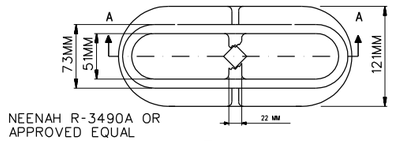


PROVIDE A SPECIAL DRIVER TO PROTECT THE SHEPPARDS HOOK.

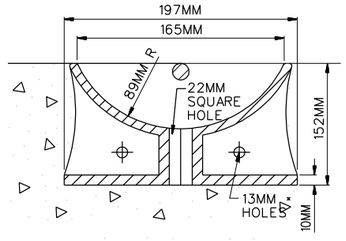


DETAIL OF STATIC GROUND POINT

NOT TO SCALE

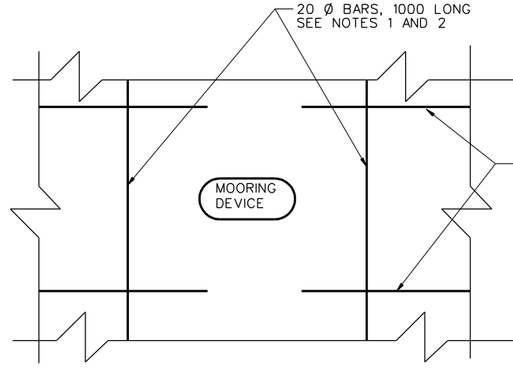


PLAN



MOORING POINT DETAIL

NOT TO SCALE



NOTES:

1. REINFORCEMENT BARS SHALL BE PLACED 75 MM FROM AIRCRAFT TIEDOWN DEVICE AND 7MM BELOW PAVEMENT SURFACE.
2. THE ENDS OF REINFORCING BARS SHOULD BE PLACED 75MM FROM PAVING JOINTS TO PROVIDE COVER.
3. THE CENTER OF THE AIRCRAFT TIEDOWN DEVICE SHALL BE A MINIMUM OF 600 MM FROM EITHER CONTRACTION AND/OR CONSTRUCTION JOINTS. THE DEVICE CAN BE RESITED AS REQUIRED TO MAINTAIN THE MINIMUM DISTANCE.

MOORING DEVICE SLAB DETAIL

NOT TO SCALE

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN METERS.

SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: DSA
DATE: 05-15-09
DWN BY: DSA
SUBMITTED BY: R. KORTYOHANN CHIEF, PDT SITE DEV
CHK BY: REK
FILE NO.: AF0908--CP08DT

US Army Corps of Engineers Transatlantic Programs Center

ROTARY WING RAMP AND TAXIWAY, PHASE II
KANDAHAR, AFGHANISTAN
SITE DESIGN
PAVEMENT DETAILS

SHEET REFERENCE NUMBER:
C-8

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5/14/2009

PROJECT TITLE: DESIGN/CONSTRUCT ROTARY WING PHASE II, KAF, AFGHANISTAN – SOLICITATION W917PM-09-R-0120

The following information must be received **no later than 72 hours** before the scheduled site visit on 18 October 2009 AT 1:00 P.M. LOCAL TIME. This form must be submitted for each person wanting to attend the site visit. Please forward the information in the following format by e-mail to:

Michael Bell
Michael.f.bell@usace.army.mil

Design/Construct Rotary Wing Ramp Phase II, KAF, AFGHANISTAN

SITE VISIT VISITOR REQUEST

Name:	
Company:	
Position:	
Nationality:	
Passport Number:	
Takara Number:	
Cell Phone Contact Number:	
Email Address:	